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CREDULITY AND CURES

FREDERICK PETERSON, M.D.

NEW YORK

The psychology of credulity is the main theme of this article—not credulity in general as applied to various religions, philosophies and political tenets—but credulity as related to the treatment and cure of disease, to the art and science of medicine. Why do people believe in "patent medicines," in all sorts of systems of healing, and quite generally also in doctors of medicine? Why do physicians often pin their faith to special methods and special medicaments? The general principles that govern faith, opinion, conviction, act also here; but an unusual factor in the field of medicine is the extraordinary complexity of the human body and mind. We often compare the organism to a machine; but even the most intricate machine is simplicity itself compared to the human body. On the one hand, we have metals and mechanics that almost any one can understand, adjust, repair and run; on the other, we have such a combination of sixteen elements in the greatest of chemical and physical laboratories, such complexity of anatomy, such intricate processes of physiology, and the whole permeated by spirit, by psychology and the mutual reaction of body and mind—all having occupied nature a hundred million years to build—that it is small wonder that even the greatest students and experts in this field of work cannot grasp it all, are dismayed at the difficulties they meet, and rejoice if a lifetime of work may chance to wrest one tiny fragment of new and permanent knowledge from the great mass of the still unknown. The healthy organism is difficult enough to know and to understand, but when we have added to this the innumerable diseases that develop within the body and the scores of invisible and intangible enemies that attack it from the outside, the problem grows colossal, and it is no wonder that people in general, no matter how erudite in other directions, have not the smallest conception of the problem of medical therapy.

The more one knows of a subject, the more critical, even skeptical, one becomes. If one knows nothing of a subject, the soil is prepared for faith, preconception, conviction. The great majority of illnesses are temporary, selflimited, and tend to recovery by nature unassisted. It is not surprising, then, that when an intelligent professor or learned clergyman happens to take during such a spell of illness a packet of cottage cheese, carefully powdered, with a long Greek name, his prompt recovery should fill him with a profound conviction of the value of the remedy. He has this one convincing case, and its being his own lends a strong personal note to his recommendation of the agent to his friends. In fact, he becomes an authority by a single case, commends it to others, and even writes letters of his experience for use by the advertisers.

The physician works differently. If he observes good effects from a remedy in one case he tries it on others, and if it works well on twenty or thirty or perhaps fifty patients he will call it to the notice of other physicians by publication in a medical journal. Others are thus led to try it, some with similar success, some with critical reservation based on exceptional experience and conditions. Gradually, after use in thousands of cases and perhaps through the years by thousands of physicians, a new remedy takes its place in the pharmacopeia with a record of all the facts as to its utility and its limitations. It is thus that the hard won truths in regard to our small armamentarium of really useful therapeutic agents have been wrested from the years[1]

CREDULITY AMONG THE LAITY

General intelligence, even great scholarship in all directions outside of medicine, is no criterion for judgment in the matter of means and methods for curing disease. Of Berkeley, one of the greatest minds of England, a philosopher, a scholar, it was said, "Ancient learning, exact science, polished society, modern literature, and the fine arts, contributed to adorn and enrich the mind of this accomplished man." He was a distinguished bishop as well as an illustrious scholar. But he discovered an elixir of life made by mixing a gallon of water with a quart of tar, leaving it for forty-eight hours, and pouring off the clear water. One of his essays which ran through many editions was "On the Virtues of Tar Water." Having tried it on himself and his family he was so sure of its efficacy that he felt it a duty to announce the wonderful discovery to the suffering world. Twenty-five fevers in his family were cured by this medicinal water. He recommended it as a preventive and alleviator of smallpox. It would cure impurities of the blood, coughs, pleurisy, pneumonia, erysipelas, asthma, indigestion, hysteria, dropsy, scurvy and hypochondria, and was of great use in gout and fevers, a preservative of the teeth and gums, and a substitute for all diet drinks and mineral waters. He forestalled criticism by saying, "Effects misimputed, cases wrong told, circumstances overlooked, perhaps, too, prejudices and partialities against truth, may for a time prevail," and furthermore, "Men may

1. This is the normal progress of a useful drug, and of course I refer only to remedies not controlled by special interests. Unfortunately, at times an agent does not follow this normal growth and evolution, but is imposed on a too credulous profession by powerful propaganda and suggestive advertising.

censure and object as they please, but I appeal to time and experiment." It is needless to say that the appeal of this wise and great man has been answered. Tar water is forgotten. I merely refer to this shining example because the same psychologic reaction to cures for diseases has been manifested often since the time of Berkeley.

Even at this moment, a quite new method of therapy is being widely exploited by distinguished scholars, who if not as able as Bishop Berkeley, still have immense influence on the academic circles of their time. An Australian music teacher by the name of Alexander has adopted a system of cure of diseases in general which would seem to be a cross between massage and chiropractic. He has written a book entitled "Man's Supreme Inheritance," describing his theories and results, and this book is now having a huge circulation in this country. Prof. John Dewey, one of the most distinguished educators in the world and a professor of philosophy in Columbia University, writes a laudatory preface to the book. The *Atlantic Monthly* in its April number this year gave the method seven pages of free advertising in the shape of an article by Prof. J. H. Robinson, professor of history in Columbia University, entitled "The Philosopher's Stone," which he found in the Alexander method after "a lifelong personal experience of physical and mental depression." He says:

> I am not telling my plain tale because I happen to have been redeemed in body and soul through Mr. Alexander's method, or because I have known others to be so redeemed. I think his ability to straighten out adults and give them new energy and courage is very important, but by no means so important as the possible application of his theories in the field of education, by which it seems as if it might be possible to raise the whole race to a far higher plane than it now occupies.

Now, what is the method? A careful search through the book affords no clear account of what the author does or how he does it, but leaves the reader naturally to infer that the only way to recover from his malady is to consult the author himself, who practices in London six months and in New York six months.

From this book of well over 300 pages, one obtains with difficulty a limited general outline of the method of the new cult. I judge it is not intended that any but the writer should be able to employ this new cure, so that the patient to obtain his supreme inheritance would have to pay doubtless a considerable inheritance tax. However, one gathers by careful reading that the first principle is to establish a normal kinesthesia by placing the patient in a position of mechanical advantage which induces a perfect system of natural internal massage such as has never before been attained by ordinary methods, and which is extraordinarily beneficial in breaking up toxic accumulation, thus avoiding evils arising from autointoxication (This is almost word for word). By the use of his special technic, the author claims to have cured paralysis, varicosity, tuberculosis, asthma, adhesions of the lungs, hemorrhage, congenital and other malformations, effects of infantile paralysis, many varieties of throat, nose and ear trouble, hay-fever, chronic constipation, incipient appendicitis, and colitis. I quote his own list. He anticipates the regeneration of mankind through his scheme of physical therapy.

Thus, we see that the assertions of an authority carry conviction to hundreds of listeners and thousands of readers, and establish credulity in mankind. It does not matter whether the authority be an expert in philosophy, religion, education or history, what he says about a panacea for disease believed in by himself will induce belief in others. The assertion of authority is a powerful suggestion to believe, but a bare *assertion* by any one, even by a newspaper advertisement or the label on a bottle of "patent medicine," acts also as a suggestion to arouse credulity, as psychologic experts in advertising have been delighted to find.

Another factor in credulity is that we are so constituted as to be tremendously inclined to believe in what we would like to believe. When a man is ill there is nothing he desires more than to get well. This predisposes him at once to faith in any promise of cure.

And still another feature in cures is mystery. The commercial and therapeutic value of a "patent medicine" is secrecy as to its ingredients. Tar water was too plain and simple to live long. If it had had an incantation said over it, if it had had to be concocted at the conjunction of some planet with the moon, if it had had some high-sounding name, like Golden Discovery or Sanatogen, it might be alive today. This is true not only of medicines, but also of other methods of cure. The religious mystery associated with Christian science and the phenomena at Lourdes, the elaborate psychologic discussion in connection with "new thought" and mind cures, the anatomic dissertations on the spine and circulation in the advertisements of osteopaths and chiropractors, the rodomontades of men who write books like "Man's Supreme Inheritance," all these dealing with the mysterious, the occult and the unknown, make a wonderful appeal to that instinct of faith in those who are utterly ignorant of the significance of the theories suggested or terms used; and if one recovers by employing one of these methods, as often happens, since most diseases are self-limited and get well of themselves, the personal experience fixes a faith in the means that cannot be shattered. If you add to this personal experience the psychologic fact that once a conviction is firmly established in the mind of a grown man, it is almost hopeless to dislodge it, one learns to understand the credulity and gullibility of the race in the matter of panaceas for its ills. No one will easily give up an opinion when it will show him to have been wrong, even foolish. No amount of argument could have upset the belief of the brilliant Berkeley in tar water, nor could we swerve Professor Dewey or Professor Robinson one iota from their faith in a "readjustment which will establish a normal kinesthesia" in their anatomies.

Now, I do not believe the medical profession has any quarrel with all these cults and methods, certainly not as to the good they may accomplish in some instances, but only so far as they may be hurtful or pernicious or untrue. We do object to the sale of secret "patent medicines" to the gullible public, even though they too may cure at times, because they have often contained dangerous ingredients such as morphin and alcohol, and because they too often lure the people into false hopes and to cruel disillusions. This is especially true of the much advertised tuberculosis, cancer and epilepsy cures. We do not object to cures by Christian science—we welcome cures by any method whatsoever, so long as they are cures—but we do object to the denial of the existence of disease and interference with its prevention in such disorders as smallpox, diphtheria and typhoid fever. It would be

idle to deny the recovery of patients under treatment by osteopathy and chiropractic, knowing what we do of self-limited diseases and the power of faith; but we have all encountered the evil results of their indiscriminate use, and deprecate their employment as a panacea by the unskilled and the ignorant. In the matter of the new cult of "readjustment to establish a normal kinesthesia," the physician cannot accept as evidence the testimony of its one practitioner, or any of the evidence of those who claim to be cured by it, as decisive of a new advance in therapy—for all this evidence is combated by ages of experience in similar exploitations. The truth is that medicine is a great and difficult and progressive science, and that its truths are the results of the sifting of the centuries. No doubt all the cults and fads and fancies that have had and are having their day contribute something to the sum total of medical knowledge. Homeopathy, which is now little practiced, doubtless helped to diminish drugging. The numerous mind cures have done good by awaking the profession to a greater realization of the importance of the mind in every therapeutic procedure, though this idea is not new, having been well described by Plato in his Charmides. The various schemes of manipulation of the body by massage, osteopathy, Zander appâratus, etc., have made valuable additions to our knowledge of physiotherapy.

CREDULITY IN THE MEDICAL PROFESSION

Now, after this résumé of the many features of credulity among the laity, I approach with some trepidation and a feeling of delicacy the subject of credulity in the medical profession itself. We, above all others, should be hypercritical, should make a cult of skepticism in therapy. But do we? No one knows so well the extraordinary progress in all branches of medicine, especially during the past fifty years; no one knows so well the tremendous difficulties and complexities encountered, the mistakes made, the old paths retraced or abandoned, the amazing vistas opened. All these experiences should make the doctor of medicine, in particular, a profound skeptic, and happily also we may well believe an optimist.

I am afraid, however, that we too—just because dazzled by the effulgence of so many new discoveries—share, in a measure, the credulity of the public in remedial agencies. We see their errors plainly, and sometimes they see ours; but do we see our own? The same psychologic factors are at work in us as in the general public for the creation of faith in the new drug or in the new method. We do not know enough about it to be sufficiently critical. This ignorance of ours prepares the ground for the new belief, the new conviction. Its value is asserted by authority. And we are eager to believe in the new hope of help held out to us for the healing of the sick. Then, again, there are the marvelous mysteries behind all the new names —hormones, opsonins, endocrines, amboceptors, etc.— such a wide field for new facts, such a vast horizon for new theories. We can hardly be blamed for not being always able to get our bearings in these uncharted seas.

It has interested me to go over in this connection some of the therapeutic measures heralded to the profession with more or less vehemence of assertion during my own day. Some of these have already passed into oblivion. When I began practice, clitoridectomy was a reputed cure for many nervous disorders. One scarcely hears of it now. About that time, too, surgeons were competing for their first hundreds in ovariotomy, an operation often then performed not because of ovarian disease, but for some theoretical relation to epilepsy, insanity and the psychoneuroses. Around that period the rhinologists came into their own with the turbinated bone obsession. I suppose the reason one hears so little of it now is that most of the turbinated bones of our generation were removed. Turbinated bones have gone out, and submerged tonsils have come in. In Vienna many cases, especially those of nervous disorders, were cured by magnets applied to the spine. Electricity had a great vogue, and large static and other machines were a part of office equipment. One rarely sees them now. For a time, suspension of patients with locomotor ataxia on the theory that stretching the spine affected favorably the fibers in the posterior roots had vogue, and it was rather startling to enter a clinic, hospital or doctor's office and see one man or several men hanging by the head from a miniature gallows. The passing of urethral sounds for the cure of locomotor ataxia had a brief but meteoric career. There was a good deal of trephining for microcephalia, under the impression that the brain would grow if it was given more room; and trephining was done for a time in general paresis but abandoned for good reasons in the course of time. The rest cure had a comparatively long life among remedial measures, and it had behind it great authority and much good logic; but as a cure it owed its success chiefly to the psychotherapeutic genius that launched it into existence. Except for the reverberations of his dicta in remote places, it is not employed nowadays, the antipodes of his teachings, namely, exercise and occupational therapy, taking its place. I suppose very few drugs have had such a rapid rise and sudden drop into the medical limbo as crotalin, exploited for epilepsy. It ended like the sky-rocket. Perhaps I should mention here in connection with crotalin, *Bacterium cincinnaticum*, which caused so many epileptics to have their colons reduced to semicolons by operation. This germ is extinct, along with the general paresis germ discovered in Scotland some years ago. I presume many recall a series of volumes entitled "Biographic Clinics," by which the enthusiastic author, an ophthalmologist, sought to prove that the majority of diseases were due to eye strain and could be corrected by prisms. He was very bitter against certain of his confrères who believed in the same etiology of human illnesses, but who insisted quite violently on the cutting of eye muscles by a long series of delicate operations to remove eye strain. The originator of the latter method was awarded a prize by a distinguished foreign medical society for his great contribution to science!

Our past experience should lead us to be extremely cautious and skeptical in the presence of many of the therapeutic measures before us now. Leaders, despite their great intelligence, and high position, often stampede the rank and file of us like sheep. Our leaders are very human and subject to the sway of the personal equation. I know one general consultant who seldom makes a diagnosis of anything except hypothyroidism or hyperthyroidism; in fact, I believe that he must in his mind have classified the whole human race as superior and inferior thyroids. I know another who does not see ordinary things in the ordinary light of day, but by a prismatic light; he sees them through the

rainbow of the endocrines. Surely, so much pulling of teeth, so much removal of submerged tonsils, is not justified by results. At least I feel so from the many cases of psychoses, nervousness, sciaticas, neuralgia, spinal pains, cervicobrachial neuritis, and the like which have come under observation after such treatment had proved futile.

I am glad to see a growing skepticism with regard to Wassermann tests. They are of real value as corroborative of clinical findings; but when these are in doubt, the Wassermann tests should be controlled by reports from three different laboratories. It is not long since a single laboratory test was considered final, and that despite the presence or lack of clinical evidence.

PSYCHANALYSIS

I shall close with a few words as to psychanalysis, on which subject I am qualified to speak, for I know Freud and Jung personally, have examined the method practically, and have or have had a number of practitioners of this cult as my friends. It has taken a considerable hold in America—though not so much in Europe—and owing to the fact that many reporters and writers are psychopaths and have undergone treatments by psychanalysis, these doctrines are now frequently encountered in editorials in newspapers, magazine articles and a few books by mediocrities. The theories of Freud and Jung are to psychology what cubism is to art, new, sensational and rather interesting. If they were not so pernicious in their application, as well as untrue in psychology, I should say nothing of them, but let them take their place in our historical medical museum along with all the other curiosities which the centuries have accumulated. In a few years they will be catalogued in that museum. I doubt if any persons have been benefited by this treatment. It requires months or years of work over each case, and it is very expensive. I have, on the other hand, seen very bad results from the psychanalysis of young women and men, permanent insanity, even suicide; and if it were not destined to be so short lived, I should advocate a law to prevent its employment in the treatment of young people.

There is only time to touch on one or two of the more salient features of the freudian theories. One of the most prominent is, for instance, that every dream is the fulfilment of a wish. This is a kind of harking back in a very crude way to the philosophical speculations on the world as will and presentation of such men as Berkeley, Schopenhauer and von Hartmann. If there is one clear fact in the psychology of our daily life it is that the essential function of the mind is its ability to deal with the future. It is anticipation of the future that guides our conduct, plans for us, chooses, distinguishes the right paths from the wrong paths that we are to follow, and the ways that are favorable to progress from those that are unfavorable. Our memories are our experience on which we base our life to be; the present is a point, the future is everything. This is true especially of youth, which is fullest of anticipation of the future, a long preparation for all that is in store. Hence our minds are always full of anticipations in our waking life—hopes, desires, wishes, plans, ambitions, aspirations, as well as fears, timidity, anxiety, dread, suspense. Naturally, our dreams, which are a sort of ungoverned replica of waking thought, but with a wider horizon of memories, reflect in a moonlight kind of way the thinking processes of our day. These anticipations come to us in our dreams. Sometimes they are pleasant; sometimes, anxious and apprehensive. Now, Freud, observing that his children usually dreamed of pleasant things anticipated, the theater, toys, country trips, quite arbitrarily jumped to the conclusion that a dream is the fulfilment of a wish. Then he said all dreams were a fulfilment of a wish, and as the obsession grew in his mind, he decided it must always be a sexual wish, however disguised. When confronted with fear and anxiety dreams he had to invent words like distortion, disfigurement, displacement, etc., to twist around an easily explicable dream, easily explicable by study of the normal anticipations of the mind, to make such a dream in some extraordinary manner fulfil a wish. When a friend of his, after hearing him lecture on this subject, came to him triumphantly with a fear dream, wholly opposed to his theory, Freud suddenly exclaimed exultingly, "You had this dream just to confute my theory. That was the hidden wish." The freudians will talk to you much about an elaborate symbolism which is wholly their invention. There are no symbols in anybody's dream life which were not first present in their conscious life. The freudian makes the claim that all the arts, and in fact all our civilization, had its origin in one drive, the sublimation of the sexual. The reader will remember that Rabelais had Pantagruel meet one Gaster in his travels who claimed that all the arts, powers, accomplishments of our civilization were the sublimation of the desire of the stomach. One theory is as good as the other. They are both rabelaisian. If one reads the analyses made by the psychanalysts, one will find a complete revelation there of the type of mind of the analyst himself, his intelligence, his logic, his symbolism, his character; indeed, one will learn much more of him in this way than one will of the unfortunate patient the analyst thinks he is studying.

CONCLUSION

Most of these methods of cure are in the past. They are a part of our experience, and of certain value as such, although mostly of a negative value. Of course, this has been more than counterbalanced by enormous accessions of positive value during the same period of time. But these errors have a lesson for us today. We must try to take a middle path, if that is possible in the presence of new theories, to be broad enough to know that there are great mysteries in our complex organisms and all the sciences that have to do with them, to feel that precious discoveries are always before us awaiting some Cortez or Columbus, and therefore not to be too prejudiced to weigh, ponder and examine; and at the same time we should cultivate the critical faculty.

20 West Fiftieth Street.

Import of Mental Deficiency.—People speak of "mental deficiency." They seem to mean by that always "intellectual deficiency," or "cognitive deficiency." I think there is far too little attention paid to deficiency in feeling, or emotional deficiency, and to the deficiency in volition or conation. The feelings and the will are just as much parts of the mind as the intellect is a part of the mind, but the term "mental deficiency," as it is often employed, nearly always refers merely to the intellectual or cognitive side. In my opinion, we see just as many, or more, defects on the emotional and conative side as we do on the intellectual or cognitive side.—Dr. Lewellys F. Barker, *New York State Journal of Medicine*.

PRESENT STATUS OF THE DEFINITE TREATMENT OF THE PNEUMONIAS

OBJECTS, INDICATIONS, AND METHODS OF USE OF QUININ, PITUITARY PRINCIPLE AND DIGITALIS

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The definite plan of treating pneumonia is so called because it uses definite agents for definite objects, on definite indications. It does not exclude, but definitely includes, rest, diet, fresh air (the open air if possible, but with regulated temperature), and all other methods of good nursing, together with the free use of water and alkaline-saline drinks (chlorids, citrates, carbonates, bicarbonates).

Its pharmacodynamic center is quinin, and the principal pharmacodynamic aids are solution of hypophysis and digitalis. These substances are not "specifics" and are not advocated as such; but their use under definite indications is of special advantage. The indications are the important elements. They constitute the plan of treatment. The drugs are merely the present means of carrying out the purposes for which they are respectively indicated, and might be superseded by other agents found by experience to be superior, without affecting the fundamental principles involved. Thus far, however, I have found no other agents equal to them; except—within limitations—the specific Type I serum in Type I cases and mixed (polyvalent) pneumonia bacterins in other cases. The serums and bacterins may some day displace drugs in the treatment of the pneumonias; but that day has not yet come. For the present the two classes of agents may usefully supplement one another. As for the watchful waiting of the "expectant" plan of treatment, that is confessedly bankrupt. "Nature cures," it is true; but in the pneumonias, nature needs the guidance and assistance of scientifically minded art.

Auxiliary agents under special circumstances are oxygen, atropin, camphor, musk, strychnin, etc., and auxiliary measures of great importance are counter-irritation at the beginning, warmth to the chest throughout, and bleeding when indicated. These need not be discussed here.

PURPOSE OF QUININ, AND INDICATIONS FOR ITS USE

Quinin is not employed for the purpose of reducing temperature, but to combat bacteria, bacterial poisons and tissue poisons. Reduction of temperature, however, is an incident of its action, and thus affords a convenient index to its pharmacodynamic effect. The temperature curve is therefore taken as a guide for dosage, both as to quantity and frequency. Commonly the temperature, if above 102 F., is brought to or below that figure within three or four hours after the administration of the drug in sufficient quantity. A persistent tendency to reascend is the indication for continuing or increasing the medication. Cases of moderately high temperature, that is to say, from 104 to 105 F., in which quinin sufficiently and persistently used, fails to make a decided impression, are rare, and the failure is of bad omen. So far as I have been able to have such cases typed, the sputum contains, either singly or in addition to other types, the organism of Type III, or of what seems to be a particularly virulent variety of Type IV. Among typed cases of resistant temperature, I have not seen any instance in which Type I or Type II was found alone. Many, perhaps the majority, of such cases have been seen late, and have given evidence, either antemortem or postmortem, of extensive suppuration, pleural or pulmonary. Various streptococci and staphylococci, sometimes Friedländer's bacillus, Pfeiffer's bacillus, *Micrococcus catarrhalis*, etc., are likewise found, but these are present also in cases that do not resist quinin. So far as my own studies go, however, quinin has no special influence on streptococcic poisoning—its virtue is against the pneumococcus. This long-standing clinical observation has been verified experimentally through a series of studies by Drs. Kolmer, Heist, Steinfeld, Weiss and myself.[1]

COMPOUND USED, AND DOSE

The preferable salt of quinin for administration by mouth is the dihydrobromid; for intramuscular injection, quinin and urea hydrochlorid; for intravenous injection, either of these, or the dihydrochlorid.

Massive dosage is commonly needed. The larger the quantity that can be taken in the first twenty-four hours, the better the prospect of recovery.

By the mouth, from 25 to 35 grains are given to begin with, and later, according to effect, from 5 to 15 grains every two, three or four hours. When the drug is given by the mouth, it is well to keep the temperature index down to 100 F. or less; and even should it fall to normal, there is no occasion for alarm, in the absence of severe symptoms of cinchonism—such as sweating, amblyopia, or tinnitus aurium. I have not, myself, encountered any instance of untoward cinchonism, the extreme tolerance of pneumonia patients to quinin being, indeed, one of the evidences of its antitoxic virtue. Two instances of transient amblyopia have, however, been reported to me. In this respect the unmodified quinin molecule differs very much from optochin (ethylhydrocuprein), whose toxicity is so great as to render it unsafe for internal use, although unequaled for local applications in pneumococcic infections. The common practice, which may be used tentatively in any case, is to make the second dose of the quinin salt 15 grains, and the third dose 10 grains, and after that to keep up doses of 10 grains every fourth hour (during the waking hours) for a day or two, and then reduce the quantity to 5 grains every fourth hour. This plan, however, is not a rigid one and is subject to considerable modification, both as to quantity and frequency, according to the reaction and progress of the individual patient. Even in cases of quinin idiosyncrasy, it will be found that quinin in large doses is well tolerated during the progress of an acute lobar pneumonia—probably in other forms of pneumococcus infection as well, although it so happens that I can speak from personal observation only of that first mentioned. I have seen six such cases, and they have furnished six instances of recovery from the infection, without injury by the drug.

By intramuscular injection, the practice originally was to give 1 gm. (about 15 or 16 grains) as soon as the patient was seen, and to repeat this every third hour until the temperature persistently remained below 102 F. Later observation would point to 100 F. as a better index point. Also, it has been found that

1. Summarized by Cohen, S. S.: Penn. M. J. **22**: 506 (May) 1919.

an initial injection of 1.5 gm. (say from 20 to 25 grains) is well borne, and that it may be followed by administration by mouth with almost equally good result as the continuous intramuscular injection. Thus the physician who sees his patient only once a day may make an injection at that visit and have even unskilled attendants continue to give the drug in capsule, in doses of from 5 to 15 grains every third hour, or every fourth hour, according to effect. If the intramuscular route is used continuously, the doses are continued at 10 or 15 grains every three or four hours until the temperature keeps at 100 F. or less. The solution is best made with boiling water, extemporaneously, and may be from 25 to 50 per cent. The skin must be painted with iodin, the injection given deeply, the needle emptied before withdrawal, and the point of puncture sealed with collodion. This averts local irritation and necrosis.

By intravenous injection, the initial dose has thus far been 1 gm. or less (from 10 to 15 grains) in 100 c.c. of physiologic sodium chlorid solution. At first, the attempt was made to make the solution neutral by the use of monosodium phosphate and disodium phosphate in physiologic proportions. An elaborate formula was worked out, and when the manipulations were carefully made, precipitation did not occur and the result was satisfactory. While this refinement was necessary to eliminate certain sources of error in some of our experiments on animals, it is unnecessary in the therapeutic use of the drug. No harm, local or general, results from the slight degree of acidity of the 1 per cent. solution in saline. It is rarely necessary to repeat an intravenous injection. The temperature commonly falls rapidly to normal or a little below, and in the course of a few hours returns to a moderate elevation. Sometimes it is not necessary to give the drug again at all; in other cases, administration by mouth in doses of from 5 to 10 grains every fourth hour, suffices.

Observations concerning the bactericidal properties of the blood and serum of cinchonized animals and men on pneumococcus cultures in vitro have demonstrated that the power to kill or inhibit the pneumococcus is retained much longer when quinin is given in even moderate doses, not more than three, or at most four hours apart, than when it is given in much larger doses but with greater intervals. The frequency of repetition therefore is important, irrespective of the size of the dose. Small doses, however, are ineffective, even when repeated as often as every two hours. The first dose must always be from 10 to 20 grains by muscle or vein, or from 25 to 35 grains by mouth. After that, not less than 5 grains, and as much as is needed.

PURPOSE OF SOLUTION OF HYPOPHYSIS, AND INDICATIONS FOR ITS USE

Solution of hypophysis is used to sustain blood pressure and prevent gastro-enteric paralysis. Gibson first observed the grave prognostic omen, in acute lobar pneumonia, of a fall in systolic blood pressure to a point at which the number of millimeters of mercury is less than the number of pulse beats per minute. The arithmetical relation is purely accidental, but is convenient for the plotting of curves. The fundamental fact of vagus and vasomotor depression shown by these curves is of high importance. Although the accuracy of Gibson's interpretation has been denied by many good observers, it has been confirmed by others, equally good; and the phenomenon described may be accepted as indicating a condition sufficiently serious to call for therapeutic correction—which is all we have to do with at present.

After considerable experimentation with various pressor agents—atropin, cocain, ergot, epinephrin and the posterior pituitary principle, in particular—the last named was chosen for routine administration for several reasons. Its action is less prompt than that of epinephrin, but equally powerful, and much more lasting. Cocain is equally lasting, but not so marked in result, and no more prompt. Atropin is as prompt as epinephrin and somewhere between epinephrin and solution of hypophysis in staying power, but no more marked than cocain. Hence solution of hypophysis excels all others in that it possesses both of the most important requisites, namely, intensity of action and duration of effect. In addition, it has the great virtue, in most instances of its continuous administration, of preventing that paralytic dilatation of the stomach and intestine which frequently accompanies the general vasomotor and cardiac depression indicated by the fall of blood pressure; both being the result, no doubt, of the action of the pneumonic poisons on the autonomic-sympathetic nerve system. When solution of hypophysis does not prevent dilatation, it frequently overcomes that untoward symptom.

The rule of practice is to inject 1 c.c. of any good commercial extract of the posterior pituitary body every third hour, until the systolic blood pressure in millimeters of mercury exceeds by five points or more the frequency of the pulse in beats per minute, and to continue its use as long as needed, in order to maintain this relation. Irrespective of pulse rate, the systolic pressure should not be permitted to fall below 90 while fever persists. In conditions of urgency, solution of hypophysis is repeated hourly, or is aided by one of the other agents (as, cocain, epinephrin [adrenalin] or atropin) given at alternate hours. When dilatation of the stomach threatens—as shown by tympany beyond the midaxillary line on percussion of the left lower thoracic region, or as indicated by other symptoms—solution of hypophysis should be given hourly for three hours, independently of the effect on blood pressure; and if the symptom is not then overcome, should be continued every two hours, with physostigmin (eserin), 1/60 grain (1 mg.), alternated hourly, as long as necessary.[2]

PURPOSE OF DIGITALIS, AND INDICATIONS FOR ITS USE

Apart from the ordinary pharmacologic action of digitalis, it appears to have, in lobar pneumonia at least, a special usefulness not explicable by anything known concerning its action on the nervous or muscular mechanism of the heart. Concerning this unknown factor, naturally, nothing definite can be said.

The purpose of the administration of digitalis may, then, be stated as the support of the cardiovascular action, particularly as evidenced by the relation of the

2. When gastric dilatation, not having been thus anticipated and prevented, occurs, the stomach should be washed out, and solution of hypophysis and physostigmin should be alternated in the manner stated. When intestinal paralysis is shown by tympanites, the same use is to be made of solution of hypophysis and physostigmin; aided by hot turpentine stupes to the abdomen, perhaps the use of turpentine by mouth, the insertion of a rectal tube, and, if necessary, by a hot enema of asafetida and alum. No degree of tympanites is slight enough to be neglected, but the activity of treatment will, of course, be regulated by the severity of symptoms.

diastolic blood pressure to the *respiration frequency*. By an arithmetical coincidence similar to that which underlies the Gibson pressure-pulse relation, it can be affirmed that whenever the diastolic pressure in millimeters of mercury falls to within less than ten points of the respiration frequency in excursions per minute, the prognosis tends to become grave; and that so long as the interval of ten points or more is maintained, the prognosis remains fairly good.

Furthermore, a drop of diastolic pressure below 60, irrespective of the respiration rate, *if occurring before fever ends*, is potentially of unfavorable import. Consequently, either rise of respiration rate or fall of diastolic pressure so far that the two curves fail to show an interval of ten points or more, or a tendency of diastolic pressure to fall and remain below 60, constitutes the definite indication for the production of full digitalis action. The effect is best measured by the rise of diastolic pressure,[3] which is a much more trustworthy and significant index than the pulse rate. Numerous charts in my possession, some of which have been published, exhibit this fact beyond contravention; and recent observations directed solely to this point, on patients with lobar pneumonia and on patients convalescing from lobar pneumonia, exhibit the digitalis effect on diastolic pressure in a marked degree, while as yet pulse rate and systolic pressure are influenced but slightly. I would invite confirmatory or connective clinical studies by others.

There is one practical point, however, which needs repeated emphasis: Even when a good preparation of digitalis is given hypodermically or intramuscularly and in full dose,[4] say the equivalent of 3 grains of the leaf, at least four hours elapse before a marked rise of diastolic pressure can be noted; sometimes it is eight hours or more. This interval can be shortened by previous sensitization of the heart to digitalis. At least, it is shorter when digitalis in moderate doses has been previously administered for two or three days. Hence it is well to give the digitalis from the beginning, in small doses—about 5 minims of a good tincture, by mouth three times a day, ordered as soon as one sees the patient—irrespective of the symptoms presented. Such dosage does no harm, in any event. The malady may run its course to recovery without any definite indication for full digitalis action being presented; but the drug is continued in these small doses, nevertheless. If, however, the indication for digitalis arises, as shown by the approach of the respiration and diastolic pressure curves, the drug is then immediately given hypodermically in full dose and repeated every four hours so long as necessary to maintain diastolic pressure at the height indicated. Should symptoms of digitalis poisoning occur, judgment would have to be used as to the continuance or discontinuance of the drug, or the modification of quantity or interval. It is only right, however, to say that digitalis poisoning has not been observed in my experience, in this manner of using the agent; and this, like the parallel quinin tolerance in pneumonia, calls attention to an obscure point in the study of toxemias of infection and drug-antidotism, that is well worth the attention of clinicians and experimenters. My own studies have made only a beginning. Additional and independent work is much needed.

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3. The diastolic pressure is taken at the time of the disappearance of the sharp sound, not at the time of the last faint puffs.

4. I have never used in pneumonia the "Eggleston method." It might be well to try it out. I am not prepared to say.

CAROTINEMIA: A NEW CLINICAL PICTURE *

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About a year ago one of us (A. F. H.) observed that two children in a ward containing about twenty-five infants, from a year to a year and a half in age, were developing a yellowish complexion. This coloration was not confined to the face, but involved, to a less extent, the entire body, being most evident on the palms of the hands, which showed also distinct signs of desquamation. The sclerotics were not at all affected. The urine was amber, and the stools normally yellow. For a time, we were at a loss to account for this peculiar phenomenon, when our attention was directed to the fact that these two children, and only these two, were receiving a daily ration of carrots in addition to their milk and cereal. For some time we had been testing the food value of dehydrated vegetables, and when the change in color was noted, had given these babies the equivalent of 2 tablespoonfuls of fresh carrots for a period of six weeks.

It seemed as if this mild jaundiced hue might well be the result of the introduction into the body of a pigment rather than the manifestation of a pathologic condition. Attention was accordingly directed to the carrots, and the same amount of this vegetable was added to the dietary of two other children of about the same age. In the one instance, after an interval of about five weeks, a yellowish tinge of the skin was noted, and about two weeks later the other baby had become somewhat yellow. There was a decided difference in the intensity of color of the four infants, indicating probably that the alteration was in part governed by individual idiosyncrasy. On omission of the carrots from the dietary, the skin gradually lost its yellow color, and in the course of some weeks regained its normal tint.

The subject was pursued farther, and blood was aspirated to ascertain whether it contained the pigment, and more particularly to determine, if such were found to be the case, whether the nature of the coloring matter could be identified. In the two instances in which blood was withdrawn, the serum, as well as the plasma, was found to be distinctly yellow, much like that which is obtained in cases of jaundice. Various tests were carried out in order to determine the solubility of the pigment. They may be summarized by the statement that it was found to be soluble in purified petroleum benzin. To test its solubility, the plasma was first allowed to stand for a short time in contact with plaster of Paris; a few drops of absolute alcohol were added, and it was then extracted by means of a large continuous extractor (of the same pattern as was employed by Myers and Wardell[1] for cholesterol, only about seven times larger) for about eight hours. The extract had a very definite yellow color, whereas subsequent ether extraction proved negative. This is the test which has been devised by Willstätter and Mieg[2] to determine the presence of carotin.

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1. Myers and Wardell: J. Biol. Chem. **36**: 147 (Oct. 18) 1918.
2. Willstätter and Mieg: Ann. d. Chem. **355**: 1, 1907.

It was evident that we were dealing with a systemic pigmentation brought about by the introduction of an excess of carotin in the food. A search through the literature failed to reveal a description of this condition, either in children or in adults. It is probable that von Noorden[3] had this pathologic condition in mind when he described a "peculiar canary yellow tint of the epidermis, which appears especially in the nasolabial folds, on the palms of the hands and soles of the feet," which he had observed in diabetes, especially in those who are youthful. He regarded this peculiar alteration as the manifestation of some metabolic disturbance and termed the condition "xanthosis diabetica," reading a paper under this title before the International Dermatological Congress in Berlin (1904).

Excellent studies, however, have been carried out on animals in the last few years by Palmer and Eckles[4] and by Palmer[5] as to the relation of fodder to the carotin content of the tissues. It was found, for example, that green feeds greatly increase the color of the butter fat of cows, mainly because they contain carotin, which accompanies chlorophyl in green plants. The body fat of the animal, the blood serum and the corpus luteum all depend for their intensity of color on the pigment of the food. This pigment, furthermore, is of two kinds: carotin, having the solubility mentioned above, and the xanthophylls, which are distinguished by being insoluble in purified petroleum benzin but soluble in 80 to 90 per cent. alcohol. In some animals, xanthophyll was found to be absorbed in by far the greater ratio, as, for example, in the hen, which, when deprived of this pigment in its food, has produced eggs having almost colorless yolks;[5] in others, as in the cow, carotin predominates in the tissue pigment. In still other animals, in the sheep and the goat, neither pigment is absorbed, so that we observe the colorless plasma so characteristic of these species. We are informed that in man "the relative proportion of carotin and xanthophyll is much more nearly equal than in the fat of cow's milk."

These pigments are very widely distributed among our foodstuffs, and it is probable that they frequently play a rôle in coloring the skin. As they are nontoxic[6] and lead to no physiologic disturbance, the discoloration is readily overlooked or attributed to some minor derangement of the liver or of the intestinal tract. The pigmentation may be brought about not only by carrots but also by any food which contains the carotinoids in high degree—we have seen it follow when the dietary included two oranges a day, or the yolk of one egg in the milk formula for a period of two months, or 2 ounces of spinach daily for one month. It is the pigment of human milk and of the highly colored colostrum, and may well play a part, although a minor one, in the icterus of the new-born.

It is probable that there will be found to be considerable individual variations in regard to the absorption of these pigments. Such was found to be the case to a marked degree in relation to another vegetable pigment which we investigated, namely, that in beets. In certain children, a diet containing a moderate amount of beets will lead to the occurrence of a red coloring matter in the plasma and in the urine, which may excite alarm. In others of the same age or younger, extraordinary amounts of beets or beet juice, as much as 8 ounces a day, may be given without any change in the body fluids.

3. Von Noorden, Carl: Die Zuckerkrankheit, Ed. 4, Berlin, A. Hirschwald, 1907, p. 149.
4. Palmer, L. S., and Eckles, C. H.: J. Biol. Chem. **17**: 191, 211, 223, 237, 245 (March) 1914.
5. Palmer, L. S.: J. Biol. Chem. **23**: 261 (Nov.) 1915; ibid. **27**: 27 (Oct.) 1916.
6. Wells, H. G., and Hedenburg, O. F.: J. Biol. Chem. **27**: 213 (Oct.) 1916.

EFFECT ON THE URINE

There is quite another aspect of this subject which is of interest: In the course of subcutaneous injections of an extract of carotin,[7] carried out in order to note whether an alteration in the color of the plasma could be occasioned by this means, it was noted that not only did the plasma become yellow but that the urine was changed in color. Following these general observations the urine was collected, evaporated to a very small volume, and extracted with purified petroleum benzin as in the case of the plasma. An extract of a definite yellow was thus obtained. In order to substantiate this result, concentrated carotin was given by mouth, and careful note was made as to whether the color of the urine was thereby heightened. The total amount of carotin in carrots is surprisingly small, less than 2 gm. per hundred pounds, and it is very difficult to obtain in a pure state. For our purpose it seemed adequate to follow the same procedure employed for the subcutaneous injections, to extract a considerable quantity of carrots with purified petroleum benzin and take up the residue with olive oil. In this way we obtained finally 15 c.c. of a preparation which represented about 10 pounds of carrots. To one infant, aged a year and a half, 5 c.c. of this carotin extract were given by mouth, and to another, twice this amount. The urine was collected previous to giving the extract and every half hour subsequently for a period of eight hours. This test definitely showed that the urine becomes yellower within three quarters of an hour after giving from 5 to 10 c.c. of concentrated carotin, and that this increased color persists for about six hours. Eighteen specimens, in all, were obtained from each case, and there could be no mistaking the intensification of color and the subsequent return to an almost colorless urine.

This pigmentation of the urine is perhaps of theoretical rather than of practical or clinical importance. Textbooks and physiologists teach that the urinary pigment is urochrome, and that it is a decomposition product of bile. If our observations are correct, it would seem that pigments derived from the blood likewise play a rôle in coloring the urine. In this way we may account for the characteristic light color of the urine in infants, compared to that of older children and of adults who are on a more liberal diet, containing a larger amount of vegetable pigment. This factor should be borne in mind in considering the nature of highly colored urines, which are now attributed solely to the absorption of bile and its derivatives.

CONCLUSIONS

We have shown that a diet rich in carotin (carrots, spinach, egg yolks, oranges, etc.) will bring about a yellow discoloration of the skin, a condition resembling mild jaundice, except for the noninvolvement of the sclera. This pigmentation, no doubt, has been frequently overlooked, confused with mild grades of icterus, or attributed to some obscure metabolic disturbance. It

7. A very large carrot was dried and completely extracted with purified petroleum benzin. The liquid was allowed to evaporate, and the carotin was taken up in olive oil. One and five-tenths c.c. of this preparation were injected.

cannot be of rare occurrence, as carotin is widely distributed throughout our diet, being a constituent of almost all our vegetable foods. It is a disturbance which, therefore, will occur most readily in those subsisting on a dietary containing a large quantity of vegetables. The discoloration of the skin is accompanied by a similar yellow tingeing of the blood serum and the plasma. The pigment in the blood was identified as carotin.

In cases of carotinemia the urine was colored yellow as well as the serum. When a small quantity of concentrated carotin was ingested, the pigment appeared rapidly in the urine. These observations are of interest in view of the fact that clinicians as well as physiologists consider that the urinary pigments are formed solely from bile or its derivatives.

VENEREAL DISEASE REPORTING IN MINNESOTA

A STATISTICAL STUDY

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MINNEAPOLIS

Until very recently, statistical statements relative to venereal disease have been largely guesses; and in case a definite basis was present, the material has been of very fragmentary nature. The only figures available have been gathered from hospital or institutional surveys and from men living more or less permanently under military discipline. No one knows how much venereal disease exists in this or any other country. Various estimates by capable men place the syphilitic portion of the population at from 3 to 15 per cent.

THE VENEREAL DISEASE RATE IN THE ARMY

The induction of several million men into naval and military service revealed on their examination an apparently larger venereal disease rate in the civilian male population than among the men in the regular army. The annual rate per thousand for the regular army in 1917 was 88. The computed annual rate for the draft army at one time shortly after the first draft went into camp mounted at one time to 388 per thousand.[1]

The second million men were more carefully examined than the earlier draft increment, and the records were more carefully kept. These men were examined at mobilization camps, and these examinations revealed that 5.4 per cent. of this million men, in all 108,000, between the ages of 21 and 31, had on the date of examination a venereal disease. How many of these men had previously had a gonorrheal or syphilitic infection that was entirely cured, or at least could not be detected in the army medical examination, it is impossible to say.

The percentage of soldiers with venereal disease has been worked out, not only for the entire group, but by state of residence. This percentage runs as low as 1.3 per cent. in some states (Vermont), and as high as 15.6 per cent. in others (Florida). All the states showing a rate in excess of 6 per cent. have a large negro population. The rate for Minnesota is 2.31 per cent.

1. Circular C-02, War Dept., Commission on Training Camp Activities.

THE VENEREAL DISEASE RATE OF THE CITIES

The rate was similarly worked out for the principal cities of the country. This rate ran as high as 27 per cent. in some of the Southern cities and as low as 2 per cent. in some of the New England cities. In all sections the urban rates were higher than the general rate for the state. The rates for the principal Minnesota cities were: Minneapolis, 4.09 per cent.; St. Paul, 3.98 per cent., and Duluth, 4.37 per cent. The general rate for cities was found to be 5.8 per cent.[2]

This short explanation is given chiefly for the purpose of showing Minnesota's relative position with reference to the prevalence of venereal disease, so far as we are able to consider the figures for the army an index of the condition of the civilian population. It is not unreasonable to believe that it is at least a fair index of the relative venereal disease incidence in the several states. Other data that will be presented in this paper indicate the draft age period as the one for which the venereal disease rate is highest among civilians. Therefore, it is not safe to assume that the percentages shown above are correct for all ages. However, we may go so far as to assume that a state having a relatively high percentage of young men with venereal disease has also a relatively high percentage of venereally infected persons in all age groups, and the comparison of ratios in different states may be the means of arriving at other conclusions of value in studying the distribution of venereal infections in our own state.

REPORTING OF VENEREAL DISEASE IN MINNESOTA

The regulation of the Minnesota State Board of Health requiring the reporting of venereal diseases was put in operation, Aug. 1, 1918. The fiscal year of 1918 ended June 30, 1919. During the eleven months of this fiscal year, 6,777 cases of venereal disease were reported. These reports, by disease and by month, are given in Table 1.

The Minnesota report card calls for certain medical and social data regarding patients with a view to furnishing material for statistical studies and, if possible, to assist in getting at the actual source of the particular infection.

Physicians have not been required to report venereal infections by the patient's name but are given the option of using the number printed on the card, as the identifying designation of the case. In spite of this option, a very considerable proportion of cases have been reported with the name of the patient, and a great number of physicians have been successful in getting at the name of the person who was the source of infection. This information has led to the apprehension of many dangerous and careless carriers of these infections by the social service investigators of the board.

The percentage of cases in which the name of the patient has been given is 62.5, leaving 37.5 per cent. reported by number. These percentages, which represent all cases reported, include, of course, the many cases reported by clinics, which always give the patient's name.

There were reported from the smaller towns of the state and from Duluth, exclusive of the clinic at Duluth, 1,611 cases. All these reports were made by private physicians, yet the reporting by name continues

2. V. D. Pamphlet 48 U. S. P. H. S. reports these advance figures. A complete report of the Surgeon-General on the physical examination of the second million men has not been made available for distribution at the date of this paper.

high, namely, 48 per cent., leaving 52 per cent. reported by number. These figures go far toward refuting the often propounded argument that a law requiring venereal disease reports cannot be enforced. In short, the physicians of Minnesota, outside the Twin Cities at least, are voluntarily reporting the names of patients in approximately one half of their venereal cases.

THE MARITAL STATUS OF PATIENTS

One of the questions asked on the report card refers to the marital status of the patient, namely, whether

TABLE 1.—REPORT OF VENEREAL DISEASES IN MINNESOTA FOR THE PERIOD AUG. 1, 1918, TO JUNE 30, 1919

	Gonorrhea	Syphilis	Chancroid	Total
August, 1918	263	372	18	653
September, 1918	320	331	22	673
October, 1918	460	225	16	701
November, 1918	354	263	12	629
December, 1918	290	260	10	560
January, 1919	316	246	21	583
February, 1919	315	229	16	560
March, 1919	346	223	8	584
April, 1919	329	230	8	549
May, 1919	375	297	14	689
June, 1919	355	225	9	589
Total	3,723	2,901	154	6,778

married, single or widowed. Under the last expression are included divorced persons. As was expected, the majority of infections were reported among single persons, the married and the widowed combined being less than the single. It was to be expected that the percentage of widowed persons would be small because this group is a comparatively small percentage of the population and is a status that is not commonly reached until long after the age at which exposure is most likely to take place. The result of this tabulation was: single, 3,932, or 60.7 per cent; married, 2,260, or 34.9 per cent., and widowed, 285, or 4.4 per cent.

The question of source of infection is, of course, one of the most important concerning which information was desired by the state board of health. The question on the report card, "Source of infection?" is supplemented by "Commercial or clandestine?"

Physicians have not only indicated whether the source was a clandestine or a commercial prostitute, but have indicated when the spouse (husband or wife) of the patient was the source of infection and when

TABLE 2.—MANNER OF REPORTING VENEREAL CASES IN MINNESOTA

How Reported	No. of Cases	Percentage
By name	772	48
By number	839	52
Total	1,611	100

the case was congenital (syphilis) or accidental. These last two classifications, being relatively infrequent, have been grouped together. The percentages are shown in Table 3.

It should be noted that a very considerable portion of the cases in which no data as to the source of infection were available are tertiary syphilitics whose infection dates back some time, but who are now being reported because of the short time that has elapsed since reporting began. It is highly probable that in the "unknown" cases the infection was acquired in the same ways and in somewhere near the same proportions as those for whom the sources were given.

A table has been prepared from which the "unknowns" have all been dropped. Out of a series of 3,710 cases, in which the reporting physician has very clearly answered the question as to the nature of the source of the infection, we have, therefore, been able to determine the corrected percentages that fairly represent the actual ratio in which these various classes of sources are responsible for the spreading of venereal disease in Minnesota (Table 4).

RELATIVE PROPORTION OF CLANDESTINE AND COMMERCIAL PROSTITUTES

It is interesting to note the fact that there were 6.5 per cent. more cases reported as infected by clandestine prostitutes than by commercial prostitutes. While this does not necessarily prove that clandestine prostitutes are quite as likely to be infected as the professional sort, it does tend to bear out similar observations that have been made before. The accidental infections are so few in number that they were grouped with the congenital syphilis cases. The 4 per cent. indicated in this group are almost all cases of congenital syphilis. It may be stated as an item of interest that a majority of them were reported by the Mayo Clinic at Rochester.

TABLE 3.—STATISTICAL DATA ON THE SOURCE OF VENEREAL INFECTION

Reported Source	No. of Cases	Percentage
Not reported or indicated as unknown	2,870	42.4
Commercial prostitute	1,604	23.7
Clandestine prostitute	1,861	27.5
Spouse	318	4.7
Congenital and accidental	108	1.6

TABLE 4.—THE SOURCE OF VENEREAL INFECTION, THE "UNKNOWN" CASES BEING OMITTED

Reported Source	Percentage	No. of Cases
Clandestine prostitute	46.8	1,736
Commercial prostitute	40.3	1,495
Spouse	8.9	331
Congenital syphilis and accidental	4.0	148
Total	100.0	3,710

The person who was the source of the infection was given in comparatively few cases, only 7 per cent. of the entire number reported. This number, about 450, would constitute about 11 per cent. of the cases in which any information at all is available regarding the source of the infection. It would seem that with thousands of cases very recently infected by prostitutes, in addition to the cases in which the spouse is the source and known by name to the physician, more of this valuable information could be secured. It is on the basis of this information that much of the most valuable work of the board in eliminating carriers can be accomplished.

DISTRIBUTION OF CASES ACCORDING TO AGE GROUPS

One of the most interesting studies in connection with these cases has been their distribution into age groups. It should again be kept in mind in this connection that the groups of cases studied include a considerable number of long-standing syphilitics under treatment at dispensaries and therefore do not show really accurately the age of infection. It does show, however, that the approximate age at which the venereal patient finds himself in the hands of a reputable physician or institution is between 32 and 33 years. A study was made of the average ages by

location of cases. For certain months the patients from outside the Twin Cities, so far as this point was studied, appear to be of the average age of 27 years. The latter cases do not include so many old syphilitics as the reports from the cities, which include clinic cases and many others coming to city specialists for the treatment of advanced conditions; but even this figure is probably too high to represent the true average age at which infection with venereal disease takes place.

Table 5 gives the age grouping in 5,683 cases. This table was made up before all cases, reported up to

TABLE 5.—THE AGE GROUPING IN 5,683 CASES OF VENEREAL DISEASE

Ages	Number of Cases	Percentage Cases
20 years and under	842	14.8
21 to 25 years inclusive	1,295	22.7
26 to 30 years inclusive	910	16.0
31 to 35 years inclusive	640	11.4
36 to 40 years inclusive	525	9.2
41 to 45 years inclusive	400	7.0
46 to 50 years inclusive	335	5.9
Over 50 years	736	13.0
Totals	5,686	100.0

July 1 and indicated in Table 1, had been tabulated. It has been noted that the age grouping has been fairly constant from month to month.

SUMMARY

The following points in particular have been observed in studying case reports of venereal disease in Minnesota for the past year:

1. Of all cases, 62.5 per cent. were reported by name, and only 37.5 per cent. by number. This includes a large number of cases reported by clinics. Of cases seen by physicians in private, practically 48 per cent. were reported by name, and 52 per cent. by number.

2. Of all cases reported, 61 per cent. were single persons, 35 per cent. married, and 24 per cent. widowed or divorced.

3. Of all cases reported, 27 per cent. are females, and 73 per cent. are males. Among those cases in which the report card contained any statement whatever regarding the source of infection, 87 per cent. were stated to be prostitutes. Of these 47 per cent. were clandestine, and about 40 per cent. were commercial prostitutes. The name of the person who was the source of the infection was reported in 7 per cent. of the total number of cases.

4. A larger number of patients fell in the age group from 21 to 25 years than in any other. The next largest group was from 25 to 30 years. This group comprised 16 per cent. of the total, and was very slightly larger than the total for all ages under 20.

Is Your Community Fit?—What is being done to protect the babies in your community? Have you a baby health station? Do you supervise the work of midwives? Do you make provision for expectant mothers in your community who are in need of advice and supervision? Proper organization for prenatal care, with sufficient bed space in maternity wards, and a baby health station should be provided if the financial condition of your community is at all able to support such expense. If your community is small, at least one full-time public health nurse should be employed for the instruction of mothers in the care of themselves and their babies. You owe this to the mothers.—*Pub. Health Rep.*, April 25, 1919.

ACUTE NEPHRITIS IN CHILDHOOD*

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At the Children's Hospital we have been for several years especially interested in nephritis. This paper is a brief exposition of our experience with the acute cases.[1]

ETIOLOGY

It is now generally recognized that the vast majority of cases of acute nephritis are of infectious origin. In the older textbooks, cold and exposure are given as perhaps the more important causes, and it is undoubtedly true that these factors may have something to do with certain cases. In chronic nephritis in older persons, the wear and tear of life, especially on the blood vessels of the kidney, is often of great importance etiologically; but as far as children are concerned, micro-organisms or their toxins may be said to play the main etiologic rôle. It is well known that in many diseases (pneumonia, typhoid fever, etc.) there is enough irritation of the kidney to cause small amounts of albumin and a few blood cells to appear for a few days in the urine; and although this has been called "acute degenerative nephritis" by some authors, I believe it is best to speak of it as "acute renal irritation," and to reserve the term "nephritis" for those cases in which the inflammatory condition of the kidney is more lasting, and is the dominant feature in the disease picture.

Scarlet fever has long been regarded as the most important cause of acute nephritis, but I believe far more cases are secondary to tonsillitis than to scarlet fever. At the Children's Hospital we take no contagious cases, and would therefore naturally see little acute scarlet fever nephritis; and in our series of chronic cases we have seen, in the last three or four years, only four or five cases due to scarlet fever. Almost any acute infectious disease in a child may bring

TABLE 1.—ETIOLOGY OF ACUTE NEPHRITIS

Disease	No. of Cases
Tonsillitis	14
Unknown etiology	15
Scarlet fever	4
Impetigo contagiosa	4
Otitis media	4
Pneumonia	2
Tonsillectomy	2
Purpura	2
Carious teeth	2
Stomatitis	1
Cold	1

about nephritis, but tonsillitis is by far the most important of them, as Table 1 will show. Whether it is the toxins of the organisms causing the primary acute disease which cause nephritis as they are excreted through the kidney, or whether the kidney is itself invaded by micro-organisms, is not certain.

The reason so many cases are classed as of unknown etiology is that in most of these instances the patients entered the hospital some time after the nephritis started, and in many it was not possible to get an accurate history. I believe there is no question, how-

* From the Medical Service, Childrens' Hospital.

1. For more detailed papers see Hill, L. W.: Nephritis of Children, Am. J. Dis. Child **14**: 267 (Oct.) 1917; ibid. **17**: 270 (April) 1919; M. Clinics N. America, July, 1919.

ever, that many of these unknown cases were secondary to mild throat infection. It is quite characteristic of those cases secondary to tonsillitis that the nephritis does not appear during the period of sore throat and fever, but usually a week or so after the patient is up and around, and apparently well.

DESCRIPTION OF TYPES

There have been many complicated pathologic classifications of acute nephritis, but for many reasons a simple clinical classification seems best, and I have therefore suggested dividing acute nephritis in children into two groups, according to the clinical picture: (1) acute hemorrhagic, and (2) acute exudative.

1. *Acute Hemorrhagic Nephritis.*—This is a type of nephritis occurring especially in children, although it is seen occasionally in adults. Its chief characteristic is a very bloody urine containing very few casts. The urine may be so bloody as to resemble clear blood, and sometimes several specimens of sediment may have to be looked over before any casts are found. The urine is not diminished in amount, and there is usually no edema. The various tests for renal function usually show a moderate impairment of kidney efficiency, but never the severe impairment that is often seen in the edematous cases with scanty urine containing many casts. The blood pressure is occasionally somewhat elevated, the highest we have ever seen being 140 mm. of mercury, but it is more likely to be normal than high. The subjective symptoms are insignificant, and we have never seen uremia in this type of nephritis. The urine usually contains blood for from six to twelve weeks, and in many cases may contain microscopic blood over a period of several months. Occasionally, a urine which shows no albumin will show a considerable number of blood cells in the sediment when examined microscopically. The prognosis is, as a rule, good, and we have seen no child die with this type of nephritis. Usually the process clears up entirely and leaves a perfectly good kidney behind it, but in a few cases chronic nephritis unfortunately develops.

2. *Acute Exudative Nephritis.*—The second type of acute nephritis, which we have called "acute exudative," presents a somewhat different picture. Edema is usually marked, and is sometimes extreme in degree. The urine output is very scanty during the early stages, and as the kidney begins to recover there is a polyuria. The urine is likely to be brownish red, with a heavy sediment of disintegrated blood, and contains a large amount of albumin. Microscopically, it shows large numbers of granular or cellular casts, and considerable numbers of blood cells. The child is likely to become more ill in this type of nephritis than in the acute hemorrhagic type. The blood pressure is usually elevated, there may be headache and convulsions, and occasionally a patient dies in uremia. The renal function tests, as a rule, indicate considerable impairment of kidney efficiency. Most patients recover, however, and usually without the development of chronic nephritis. Two patients out of twenty-four with this type died during the acute stage.

In our series of forty-nine cases of acute nephritis there were twenty-five of the "hemorrhagic" and twenty-four of the "exudative" type. In most of the hemorrhagic cases, tonsillitis was the etiologic agent, as it was also in the "exudative" cases; but far more of the exudative cases were of unknown etiology than were cases of the "hemorrhagic" type.

TREATMENT

Acute nephritis of either type should always be regarded as a serious disease. It seems rather unnecessary to say this, but I have seen a number of patients without edema who were allowed up and around, although the urine contained a large amount of blood.

It is especially important to keep a child with acute nephritis warm, and at the Children's Hospital we always have these children wrapped in an extra blanket, and take especial care to keep them out of drafts. It goes without saying that bathing and proper care of the bowels are of great importance. In the cases without edema we use licorice powder as a laxative, and in those with edema, when free watery catharsis is desired, magnesium sulphate. It is surprising to see how well most children take magnesium sulphate; they do not seem to object to it as much as do adults. Sometimes the best results can be obtained with it if it is given in small, frequent doses, that is, 1 teaspoonful every hour for five or six doses. Diuretics play a very small part in the treatment of acute nephritis, and most authorities are agreed that the stronger diuretics, such as the caffein derivatives, may do more harm than good in this condition. There is no objection, however, to giving such mild diuretics as potassium citrate or cream of tartar. Iron is always indicated in acute nephritis of any type, as there is a considerable daily loss of blood in the urine, and anemia rapidly develops. For children, we prefer the saccharated ferric oxid in doses of from 3 to 5 grains three times a day. We have used the hot pack, or hot air bath, to promote sweating, in a few cases with extreme edema, but in the vast majority of patients the edema can be controlled by dietary measures and purgation. In severe cases, the hot air bath is used as an adjunct to these. Drugs, with the exception of laxatives and cathartics, are of comparatively small value in the treatment of acute nephritis, and far more important is the general care of the patient, particularly as regards the diet and the water intake.

Diet.—In acute nephritis we are dealing with acutely inflamed kidneys. It should be our aim, in accordance with general therapeutic principles, to rest these irritated organs as much as possible, and to protect them from the irritating end-products of metabolism. Foodstuffs may be divided into four groups: fat, carbohydrates, protein and salts. The fats and carbohydrates are not excreted through the kidney, but are burned in the body; therefore, free administration of fat and carbohydrate is permissible in acute nephritis. The kidney's chief function is to excrete the end-products of protein metabolism and some of the salts, particularly sodium chlorid. Consequently, in any dietary measure designed to spare the kidney, it is necessary to consider these two substances.

Protein: It is not desirable to put a patient with acute nephritis on a strictly protein free diet, which would probably do him more harm than good, as a certain amount of protein is necessary to repair the wear and tear of body tissue, and to keep the patient in nitrogenous equilibrium. Not a great deal is known of the exact protein requirements of children, but probably the old figure of from 1.5 to 2 gm. protein per kilogram of body weight is near enough to the actual requirement for practical purposes. The child should have, then, not more than 2 gm. of protein per kilogram of body weight. For practical purposes, in many cases, it is quite sufficient to omit meat, eggs, fish and

meat soups from the diet, and to make it up of cream, milk, cereals, bread, potato, etc. In the hospital we usually roughly calculate the protein and caloric value of the diet, according to the accompanying table of values (Table 2).

Table 3 represents an actual diet given during the acute stage to a boy, aged 5 years, with acute hemorrhagic nephritis.

Salt: In the cases without edema, it is quite sufficient to prohibit any salt cellar on the tray. The bread and butter does not need to be salt free, nor is it necessary to omit salt when cooking the vegetables and cereals. In the edematous cases, a more rigid salt restriction is necessary, as the most generally accepted view of edema in acute nephritis is that it is brought about by a primary salt retention with secondary water retention. In this group of cases the butter should be unsalted, and the bread, cereals and vegetables should

TABLE 2.—CALORIC VALUE AND PROTEIN CONTENT OF ORDINARY FOODS*

Food	Calories	Grams of Protein
Whole milk, 1 quart	670	34.0
Skim milk, 1 quart	400	35.0
Gravity cream, 1 pint	860	14.0
Buttermilk, 1 quart	360	35.0
Whey, 1 quart	200	9.0
Beef juice, 1 ounce	10	2.0
Crackers, 1 ounce	120	3.0
Bread, 1 slice	75	3.0
Zwieback, 1 slice	120	3.0
Shredded wheat biscuit	105	3.0
Rolled oats (cooked), 1 tablespoonful	35	1.5
Cream of wheat, and most other cereals (cooked), 1 tablespoonful	40	1.5
Potato, size of large egg	70	2.0
Macaroni, 1 tablespoonful	30	1.0
Egg—		
Whole	72	7.0
Yolk	60	4.0
White	12	3.0
Meat, fish, 1 ounce	60	7.0
Bacon, 1 slice = ½ ounce	90	1.5
Butter, 1¼-inch cube = 1 ounce	225	...
Sugar—		
Milk, 1 round tablespoonful	60	...
Cane, 1 round teaspoonful	25	...
Green peas, Lima beans, 1 tablespoonful	40	3.0
Carrots, squash, turnip, beets, onions, 1 tablespoonful	30	1.0
Orange (medium sized)	50	...
Apple (medium sized)	70	...
Banana	115	2.0
Prunes, 4 without sugar	30	...

*Table used in Children's Hospital, prepared by Dr. J. L. Morse.

be cooked without salt. Such a diet is called a "salt free" diet, but the designation is not strictly accurate, as most of the ordinary foodstuffs contain a small amount of salt. This is not enough, however, to do any harm. The employment of a "salt free" diet is one of the most effective methods we have of getting rid of nephritic edema, especially when its use is combined with free catharsis and fluid restriction.

Water: In the nonedematous cases no restriction of water is necessary, and indeed it is desirable to give a reasonably large amount of water, as it helps in diluting and eliminating toxins. In these cases the kidney is usually able to handle water, and about 48 ounces of fluid a day is what we like to have the patients take. If the urinary output becomes much less than about two thirds of the intake, and the patient begins to gain in weight, the amount of water should be reduced.

The edematous patients need to be restricted considerably as regards the fluid intake. It is rarely advisable to try to give less than 12 ounces of fluid a day, as there is too much suffering from thirst. Most children, in ordinary weather, can get along very well for a limited period of time on from 16 to 20 ounces of fluid a day. If the patient handles water well, and there is no increase in weight or edema, the fluid intake may be gradually raised. It is important to weigh these patients every day, as often there will be an increase in weight, due to waterlogging, that is not apparent on the surface of the body. It is also important to keep a daily record of the fluid intake and output, and to observe closely their relationship.

EDEBOHLS' OPERATION[2]

This operation consists in stripping the capsule from the kidneys, and should not be considered except in extreme cases, when there is a large amount of edema present which will not respond to ordinary measures of treatment, or when the patient is in such a severe state of uremia or anuria that the prognosis is very bad.

This operation has been used more in chronic cases than in acute, but we have had it performed in three of our acute cases with these results:

1. In a case of severe acute exudative nephritis, the operation undoubtedly saved the child's life; the child recovered completely.

2. In a case of severe acute "exudative" nephritis, the operation saved the child's life temporarily, but did not prevent the development of a chronic process.

TABLE 3.—ACTUAL DIET GIVEN IN ACUTE STAGE TO BOY, AGED 5 YEARS

Food and Amount	Calories	Protein, Gm.
Oatmeal, 2 tablespoonfuls	70	0.3
16 per cent. cream, 2 ounces	107	1.8
Sugar, 4 drams	100	...
Bread, 3 slices	225	0.9
Butter, 2 cubes	450	...
Peas, 1 tablespoonful	40	0.3
Potato, 1 tablespoonful	70	0.2
Custard, 2 tablespoonfuls	110	0.5
Orange juice, 6 ounces	78	...
Ice cream, 2 tablespoonfuls	77	0.9
	1,327	24.7

3. In a case of subacute hemorrhagic nephritis, the operation did no good.

CARE DURING CONVALESCENCE

The child should not be allowed out of bed until the urinary sediment is practically free from blood. By this I mean 3 or 4 red blood cells to a high power field. A small amount of albumin may persist intermittently for months, and is not a contraindication to a moderate amount of activity. If the amount of blood increases when the patient gets up, as it does in some cases, he should be put to bed again. During the ambulatory stage of convalescence, it is especially important to avoid overexertion and chilling of the body. The patient should be kept under observation, for at least a year, and the urine examined every month or two. It is not necessary during convalescence to keep the child on as strict a diet as during the acute stage, and meat or eggs may be allowed once each during the day. It is especially important to guard the patient against throat and respiratory infections, as often if one of these occurs there is an acute exacerbation of the nephritis.

If the tonsils were apparently the original source of the disease, they should be removed as soon as the character of the urine has begun to improve, usually before the patient has been out of bed. If there are any dental pus pockets, the offending teeth should be extracted.

99 Commonwealth Avenue.

2. For a more complete discussion of this operation see Morse, J. L.: Edebohls' Operation, J. A. M. A. **69**: 525 (Aug. 8) 1917.

THE OMISSION OF DRAINAGE IN COMMON DUCT SURGERY

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Too little attention has of late been devoted to the possibility of a cleaner and safer technic in common duct surgery, namely, the tight closure of the duct following exploration, and closure of the abdominal incision without the use of drainage material of any type. This technic was attempted and abandoned in the early days of gallbladder surgery because of disastrous results, which we feel now can be avoided. Most theses on the surgery of the biliary tract emphasize two points essential to a safe outcome: (1) that the common duct itself should be well drained by placing a tube either within it or to it, and (2) that the abdomen should be drained down to the line of suture. It has been pointed out: (1) that the infected ducts should be drained as infection elsewhere is drained, and (2) that closure of the common duct is not without dangers of the leakage of infected bile.

Contemporary literature contains few references to any attempts at radical changes in common duct surgery. Most surgeons feel that when the common duct has once been opened, the safety of the patient lies in free drainage. But we feel that several important factors in details of technic have been overlooked, the observance of which will make the procedure we wish to suggest almost universally applicable.

The patent common duct, lined with mucous membrane, is a suitable drainage tube in itself and offers an ideal method of draining the affected parts above. If its patency is assured, it may be opened and sutured with impunity, as we would suture the intestine. The means used of assuring ourselves of its patency will be described.

We explore all ducts that show obvious pathologic changes. These changes include either enlargement or the palpatory findings of stone or the presence usually of numerous small stones in the gallbladder when there is any suggestion either of enlargement of the duct or a clinical picture of common duct involvement. We open most ducts showing enlargement, since this usually denotes obstruction due either to stone, to stricture, or to a thickened sphincter. Enlargement is, however, often associated with a functionless, shrunken gallbladder. We open the ducts in all jaundiced cases. A large proportion of these ducts carry infected bile, and this undoubtedly is an important factor in the greater mortality that accompanies common duct exploration over that of simple cholecystectomy.

It is the details of technic rather than any new operative procedure that we wish especially to emphasize: The duct is exposed in the usual manner; a variety of procedures may next be indicated. It is palpated for stones; to complete exploration, mobilization of the duodenum may or may not be necessary. The duct is then incised in the supraduodenal portion. This we have found to be more satisfactory than exposing through the cystic duct, because in cases in which it is necessary to extend the incision, it is difficult to get a tight suture line at the juncture of the two ducts. Furthermore, the inadequacy of exploration through the stump of the duct must be obvious to any one accustomed to a free incision in the common duct.

The use of the silver probe or sound is an unreliable method of determining the patency of the duct, since by this method a stone of sufficient size to obstruct the free flow of bile may be overlooked. For determining the patency, a scoop or curet is more satisfactory and should be passed through the duct into the duodenum. Transduodenal cholecystectomy remains, however, the safest method of determining the condition of the distal end of the duct, when there is doubt concerning its condition. The biliary orifice is readily found, the sole cause of difficulty probably being an incision placed too high on the duodenum. When in doubt, the location of the end of the duct may readily be determined by passing a probe down the duct from above. That is, a supraduodenal incision is always made in addition to the transduodenal exploration. The orifice having been found, it is slit open to permit the removal of stone or to correct a stricture. It should be emphasized that opening the duodenum is a relatively safe procedure, and should be resorted to more frequently. An overlooked obstruction in this portion of the duct would be a fruitful cause of back leakage through the line of sutures in the duct above.

The patency of the duct being thus assured, and only under these conditions, the common duct is carefully sutured with the finest needles and suture material obtainable. Here lies the crux of the situation: capillary leakage through the line of the suture must be a constant accompaniment of the use of ordinary suture materials. In 1913 Courtenay,[1] working under the direction of one of us (H. M. R.), demonstrated that the finest suture materials that could be handled gave the nearest to ideal results in intestinal suturing. Thus human hair, used with the finest cambric or bead needles, obtained the conditions most to be desired in intestinal suturing: 1. The immediate strength of the line of suture as determined by hydrostatic tests was greater than when a heavier suture was used. 2. There was no capillary leakage along the needle perforations. 3. The histologic sections showed the minimum amount of scar, an ideal condition.

We have used two layers of such sutures, one uniting the free edges, the other burying the first row. In one case, the duct appeared not to be large enough to permit of its inversion in this way, and a single layer of sutures was used with perfect success. An essential part in the suturing of the duct is to include its peritoneal coat. No drain of any kind is placed in contact with the suture line any more than would be done in the case of a sutured bowel. The analogy is exact. The suggestion of E. Wyllis Andrews to drop the omentum down between the liver and duodenum to prevent postoperative adhesions is well taken.

Closure of the duct in this manner, avoiding the use of any foreign body for drainage material, is accompanied by a minimum of peritoneal traumatism. In previous articles[2] we have called attention to the ability of the peritoneum to care for infection. The soiling by infected bile, that may occur during exploration, caused practically no postoperative clinical reaction. In the absence of drainage, postoperative adhesions are reduced to a minimum. The extensive postoperative adhesions, following gall tract operations, are

1. Courtenay, G. T.: Illinois M. J. **23**: 443, 1913.
2. Richter, H. M.: Surg., Gynec. & Obst. **28**: 399 (April) 1919; Buchbinder, J. R.: Ibid. **29**: 70 (July) 1919. Richter, H. M.: Ibid. **29**: 445 (Nov.) 1919.

due much more to the gauze drains than to any other factor. An analogy may be found in the postoperative adhesions in the female pelvis following prolonged drainage. The omission of drainage results in the omission of adhesions.

We have carried out this technic in consecutive operations only in the past three months, during which time we have operated on eleven patients, with one of whom only did we vary the technic by placing a piece of rubber dam down to the duct. In the ten cases, there was prompt recovery with a convalescence that was exceptionally smooth. In the one case, in which the rubber dam was used, an accumulation of purulent bile developed on the third or fourth day and was evacuated, after which recovery was prompt.

We began this practice following five years' experience in closing without drainage in our cholecystectomies during which, in a considerable series of cases, we have had no occasion to regret our action. As in the case of cholecystectomy, we do not feel that every common duct operation should be completed without drainage. It would not be safe in the presence of a virulent infection with severe inflammatory reaction present. It cannot easily be done when the duct is small. The frequency of the need of drainage is possibly illustrated by this series in which it was used once in eleven consecutive cases. A condition that occasionally requires gauze packing is oozing from the liver surface. This is unusual and did not occur in the series, though the gallbladder was removed in each case.

We offer these suggestions with a feeling that the one radical improvement in the technic of gall tract surgery is the omission of external drainage, and that a wider use of this method will demonstrate not only its feasibility, but also its comparative safety.

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RENAL FLUOROSCOPY AT THE OPERATING TABLE*

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Surgical treatment of renal lithiasis is rendered unsatisfactory by complications as follows:

1. The difficulties of an exact interpretation of the roentgenogram.
2. The difficulty of locating the stone.
3. Inability to find the stone.
4. The possibility of overlooking one or more stones when multiple stones are present.
5. The possibility of having fragments of stones broken off or loosely connected with the original stone.

It is true that a large number of renal stones are easily diagnosed and removed. This is particularly true of stones with a diameter of two or more centimeters, situated in the pelvis. When the stone is small and flat, however, or when it is deep in the calix, projecting into the cortex, palpation of the stone may be impossible, even when the kidney is brought out of the incision. The possibilities of error in diagnosis have been greatly reduced through the aid of cystoscopy and pyelography. Nevertheless, it may be quite impossible (1) to differentiate extrarenal shadows which are obscured by the renal pelvis outlined in the pyelogram; (2) to identify small stones in the kidney that have not caused any pathologic changes in the outline of the renal pelvis, and (3) to recognize calcareous patches which are occasionally found in the kidney cortex and differentiate them from actual stone.

The preoperative localization of the shadow has been made fairly accurate (1) by interpretation of the size and shape of the shadow; (2) by the relation of the kidney to the shadow, and (3) by means of pyelography. Stones with a triangular or branched outline are almost always situated in the pelvis. If the outline of the kidney is definitely determined by the roentgenogram, the position of the stone may frequently be approximately inferred. Although pyelography will usually afford even more accurate data in the localization of the stone, it may also be inexact. It may be impossible to determine whether the stone is free in the upper calix, impacted in the end of the calix, or projecting partially or wholly into the cortex.

Nothing is more disconcerting than the inability to find a stone in the kidney when the various methods of clinical examination have definitely shown it to be there. In the presence of a hydronephrosis, particularly when the dilatation is largely confined to the calices, a stone of fair size may be secreted in the bottom of a calix and defy discovery by the palpating finger. A stone lodged in the end of a calix which is shut off from the pelvis by inflammatory or cicatricial change may escape palpation. When the stone is in the cortex, the venous congestion of the kidney consequent to delivery may render its palpation exceedingly difficult. Needling, while occasionally of aid, is more often of doubtful value, and since it causes considerable damage to the kidney tissue, should be discouraged. Cortical incision, when extensive and multiple, is objectionable because of consequent destruction of renal tissue and the danger of subsequent hemorrhage.

It may be very difficult to determine, from the roentgenogram, the number of stones in a kidney. The shadow may appear to be single when in reality it represents two stones which either overlap or are closely approximated. What appears to be a single branched stone may be made up of several distinct stones. The shadow may be misleading when it has a projecting branch which is seemingly explained by irregularity in the stone removed; a second small stone which actually caused the shadow may be easily overlooked. On the other hand, the shadow of an irregular stone may assume an outline and consistency suggestive of several stones. When only one stone is found at operation, the surgeon, after persistent search with more or less damage to the kidney, is still in doubt as to a remaining stone.

On the removal of branched stones, fragments are easily broken off, particularly when the ends are impacted in minor calices. Examination of the stone removed may show this, but more often it cannot be determined definitely. Rough stones that are extracted with difficulty may have a soft fragment wrenched off. Occasionally soft stones have a putty-like mass of crystals adjacent to them which may later form the nucleus of another stone.

Because of the difficulties in interpreting the roentgenograms and determining the number and location of stones, surgery for renal lithiasis is frequently an unsatisfactory procedure. Many so-called cases of recurrences of renal lithiasis are due to the fact that

* From the Section on Urology and the Section on Roentgenology, Mayo Clinic.

the stone or stones have not been completely removed at the time of operation. Whether or not stones or their fragments have been overlooked may often be determined by a roentgenogram made following convalescence from operation. This may give the desired information; but if a shadow persists, the patient's condition will not be improved, and the surgeon is then faced with the awkward necessity of being obliged to advise either an immediate or a postponed operation. An immediate operation is rendered difficult by the patient's condition, by changed conditions of the perirenal tissues, the possibility of renal hemorrhage, and so forth. If the operation is postponed, the patient may neglect the condition until the kidney becomes seriously damaged.

Realizing the difficulties involved, it is apparent that a more accurate method of examination of the kidney at the time of operation is desirable. Unfortunately, the usual roentgenographic examination at the operating table is an awkward procedure and requires too much time. It would seem that if fluoroscopic examination when the kidney is brought out of the wound could be made practical, the various difficulties surrounding lithotomy would be readily overcome. Taking advantage of the recent improvement in fluoroscopic apparatus and simplification of roentgenographic machines, we have employed the apparatus described herewith.

APPARATUS

The apparatus used for making fluoroscopic observations of the kidney at the operating table is essentially the same as that used in the base and field hospitals of the army, but with certain minor changes which make it adaptable to civilian practice.

Such instruments (machines) consist of a transformer and autotransformer enclosed in a metal cabinet mounted on large casters for portability. To the cabinet is attached a tube stand with a horizontal arm having universal joints for supporting the tube. The tube is of the Coolidge radiator self-rectifying type, mounted in a lead glass shield.

The unit is small and compact, requiring less than 2½ square feet of floor space. It is of light weight, is portable, and has no moving parts which might cause noise and vibration. The current is turned on and off either by a hand or a floor switch. These portable units may be operated from the ordinary lamp socket without special wiring.

TECHNIC

As an essential preliminary, the roentgen-ray operator should wear goggles of smoked glass for about fifteen minutes before the observation is to be made in order that he may have the necessary dark-accommodation and retinal perception. The roentgen-ray unit should be placed as close to the operating table as possible, and the rays focused through a small diaphragm so that they will pass through the delivered kidney on the fluoroscopic screen. When the fluoroscopist is ready to make the roentgenoscopic examination, the hooded screen held in the left hand is placed over the eyes, and the goggles are removed. The current is turned on by means of a foot switch. In the right hand is held a sterilized metal-tipped rod 18 inches long with which the fluoroscopist accurately points to the stone shadow in the kidney. The exposure is short, requiring little more than a flash. The various details can be easily arranged so that there is no interference with surgical asepsis.

A CARDIOPLEURAL SUCCUSSION SIGN*

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The object of this report is to describe and explain a most unusual—and to us, new—physical sign.

REPORT OF CASE

A man, aged 21, was admitted to the sanatorium, June 11, 1918, with a history of two years' illness. Because of repeated, large hemoptyses, in the presence of a unilateral left-sided tuberculosis, pneumothorax was induced, July 25. Moderate amounts of air (about 500 c.c.) were injected at intervals varying from a few days to four weeks, without reactions. November 1, he developed a spontaneous pneumothorax with an effusion two weeks later, at first serous but rapidly becoming purulent. Because of pressure symptoms, he was aspirated, April 9, 1919, 900 c.c. of purulent fluid being removed and replaced by 600 c.c. of air. This was repeated, September 4.

June 20, 1919, the patient complained of a constant noise in his chest which seemed worse at night and prevented sleep.

Physical examination revealed a left-sided pyothorax to the clavicle, with a clear right lung and cardiac displacement to the right. The apex of the heart was neither visible nor palpable. The left border could not be percussed out because of flatness due to the effusion, while the right border was about 3 cm. to the right of the right sternal margin. The heart sounds were regular, clear and without accentuations. A distinct, short splash could be heard at each systole over the entire precordium. The splash could be heard easily without a stethoscope by placing the ear before the open mouth of the patient. It was audible to the patient himself.

The explanation of this peculiar sign was not obvious roentgenologically until September 6. Fluoroscopy at this time disclosed a conical accumulation of fluid at the left base, apex down, with a fluid level above, pulsating distinctly with each heart beat. The lung was well collapsed, except at the base, which explained the conical appearance of the fluid. The heart was displaced moderately to the right. The right diaphragm was freely movable; the left diaphragm was immobile, the outer half being lost in the fluid shadow.

COMMENT

A splashing sound synchronous with the heart beat is described by the French as the "bruit de moulin" and is supposed to be characteristic of hydropneumopericardium.[1] It occurred in nineteen out of thirty-eight cases collected by James, who also mentions it as occurring conceivably in hydropneumothorax, but cites no case. Speaking of pneumopericardium, Babcock[2] says, "Finally, the confounding of this disease with the presence of air and fluid in the pleural cavity is scarcely likely, if one will bear in mind that in pneumothorax the succussion sound is only obtained when the patient's body is agitated, while in the affection under discussion, the peculiar sound is present even when the patient is at rest."

This statement is not necessarily true. In our case pneumopericardium could be definitely ruled out by the fluoroscopic examination alone, while the history and physical signs do not in the least suggest such a possibility. Obviously, our patient had a pericardial-pleural adhesion which set the fluid in the pleural space suddenly in motion at each cardiac contraction.

* From the Sanatorium of the Jewish Consumptives' Relief Society.

1. James, W. B.: Tr. A. Am. Phys. **19**: 351-363, 1904.
2. Babcock, R. H.: Diseases of the Heart and Arterial System, Ed. 3, New York, D. Appleton & Co.

Falling Birth Rate.—In the six months during March, 1919, the number of deaths in England and Wales exceeded the births by 126,000.—*Medical Officer*, Nov. 1, 1919.

RATIONAL SURGERY OF VISCEROPTOSIS BY THE CORRECTION OF MALFUSION *

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This paper is based on observation and treatment of many nonoperative cases of visceroptosis, and on careful examination within the abdomen, and operation for its cure, in 116 cases. After-results are based on questionnaire returns from eighty-five patients, who were operated on more than one year ago. The first operation was performed eight and a half years ago.[1]

It is generally accepted that the most rational plan of relief for visceroptosis consists in its treatment by means of belts, postures, calisthenics and fattening. There are cases, however, which under the most painstaking attention to these principles fail to respond in a satisfactory degree. It is only in such cases that the assistance of surgery should be employed.

MALFUSION

To go back to the beginning, there is an embryologic basis for the congenital type of visceroptosis, which is more common than the acquired, being 96 per cent. in our series. This consists in certain defects in the process of agglutination and fusion of the peritoneum

Fig. 1.—General visceroptosis: ptosis of flexures and consequent ptosis of transverse colon with secondary atony and elongation; ptosis of right kidney; axial rotation of liver and stomach, with prolapse of liver and pylorus.

of the back with that of the cecum, ascending colon, hepatic flexure, splenic flexure and descending colon. These errors in fusion are harmful, when later they result in ptoses, angulations, constrictions and traction strains; and we shall consider them under the general term "malfusion." Thus, malfusion constitutes the fundamental pathology in visceroptosis.

The prevailing operations, of suspension, plication, colectomy, colostomy, etc., are not universally accepted. We see in them a basic objection in that they do not strike at the source. They do not correct the mal-

Fig. 2.—Ptosis of colon, involving the hepatic flexure and transverse colon; such findings may mean much or little, depending on the location of traction strains.

fusion, nor do they restore the static equilibrium of the abdominal viscera one to another, and, therefore, they can scarcely be expected to give uniformly good results.

Rational surgery, as herein described, is a constructive procedure, as the ptosis subject is virtually rebuilt, after the pattern of the normal subject. The principles involved are, primarily, the replacement and retention of the colon, by producing fusion at the back of the bowel, where fusion should originally have occurred.

Special attention to anatomic accuracy in the region of the flexures is necessary, as the position of the flexures is of vital importance to the reestablishment of visceral equilibrium. With the fundamental or primary defects thus repaired, attention is directed to the individual correction of various secondary results of malfusion.

Malfusion is encountered in two forms: (1) hypofusions, and (2) hyperfusions.

HYPOFUSION, AND THE HEPATIC FLEXURE SEQUENCE

Hypofusion, or laxity of attachment, permits prolapse of the colon, resulting in abnormalities in the position and relation of the viscera.

In our series of cases, ptosis of the hepatic flexure was found to be equally as frequent as that of the cecum and ascending colon (89 per cent. in each instance). It is my object here to show that the position of the hepatic flexure is the vital point, and constitutes the key to the situation.

If, primarily, the hepatic flexure is permitted to come downward, forward or inward, the transverse colon

* Read before the Section on Obstetrics, Gynecology and Abdominal Surgery at the Seventieth Annual Session of the American Medical Association, Atlantic City, June, 1919.

* Because of lack of space, this article is abbreviated in THE JOURNAL. The complete article appears in the Transactions of the Section and in the author's reprints. A copy of the latter will be sent by the author on receipt of a stamped addressed envelop.

1. A preliminary report was read before the Illinois State Medical Association, and published in the Illinois Medical Journal in December, 1912.

will necessarily be carried with it and allowed to sag, so that ptosis of the hepatic flexure is always accompanied by ptosis of the transverse colon. Furthermore, a

Fig. 3.—Malfusion: hypofusion with prolapse of hepatic flexure and transverse colon; hyperfusion, or adhesion formation, from hepatic flexure to gallbladder and liver; and from bend of ascending colon to flank, producing angulation and traction strains.

primary ptosis of the hepatic flexure will be followed by a definite sequence of secondary changes in the position of the other viscera, constituting general visceroptosis (Fig. 1).

The hepatic flexure sequence is as follows:

The hepatic flexure, coming out of its housing beneath the liver, produces a vacancy in the upper abdomen. As a consequence, the liver will rotate inward or forward to occupy this space, producing ptosis of the liver, and the costal margins will collapse. The axis of the liver now assumes an oblique direction. If the kidney also prolapses, the liver rotation is further exaggerated.

The inward rotation of the liver carries with it the pyloric end of the stomach, which now assumes a position near the median line at a much lower level than formerly, constituting ptosis of the stomach. The main axis of the stomach is now nearly vertical. If the splenic flexure also prolapses, this change in the stomach axis is exaggerated.

The transverse colon often loses its sacculations, owing to atony of the longitudinal muscle bands, and in addition to its ptosis is thereby actually elongated.

It is evident, thus, that if the ribs are lifted and the flexures are now replaced in the upper abdomen, deep in the flanks, under the liver and stomach, and retained there, the liver and stomach rotation will be prevented. The pyloric outlet of the stomach will be elevated and brought further to the right, and the span of the transverse colon will be lengthened, and it will again hang as a festoon between the two upright fixed portions of the colon.

HYPERFUSION, AND TRACTION STRAINS

Hyperfusions are localized adhesion formations, usually having their origin in certain vestigial embryonic membranes. Fibrous hypertrophy, and later contraction, may occur as a result of the intermittent traction of a loose segment of the bowel. These formations will then produce constrictions and angulations of the colon, and traction strains at both ends of their attachment.

The finding by roentgen ray or otherwise, as in Figure 2, may mean much or little. The patient may enjoy perfect health, or may be an invalid. This depends on whether the malfusion is so formed as to afford easy, uniform and regular support, throughout the length of the colon, in its faulty position; or whether the support is irregular, holding under local tension at one point, with marked slackness at other points, thus producing local traction strains, as seen from the interior in Figure 3.

Here we see the cecum and part of the ascending colon in normal position. There are two small but firm bands of adhesion at the bend of the ascending colon, one passing beyond the longitudinal muscle bun-

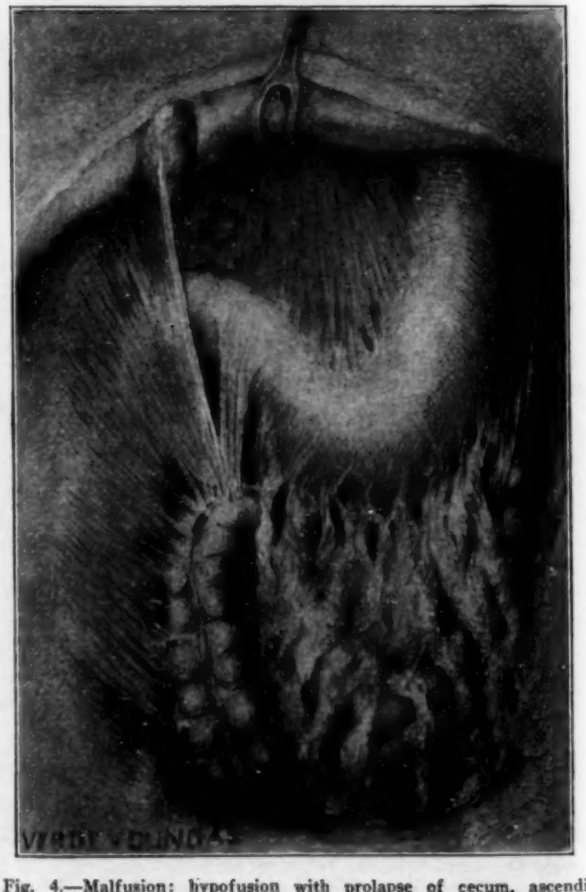

Fig. 4.—Malfusion: hypofusion with prolapse of cecum, ascending colon, hepatic flexure and splenic flexure, with consequent prolapse of transverse colon; hyperfusion or adhesion formation from hepatic flexure to gallbladder and pylorus, and from splenic flexure to spleen and flank, producing angulations and traction strains.

dle, and so placed as to produce an angulation, and to take the strain of bearing part of the weight of the upper half of the ascending colon. The hepatic flexure

is downward and inward, and rather evenly supported by a fairly uniform, but very long mesocolon. The end of the hepatic flexure, and beginning of the transverse colon, is supported in an angulated position by a large, firm band, attached to the gallbladder and to the liver. The effects of physical exertion, producing traction strain, on the gallbladder and bile ducts, as well as on the colon, in this case are evident.

Fig. 5.—Operation: mesocolon of the hypofused ascending colon and hepatic flexure, held in position for the application of sutures, which are to obliterate it and fuse the bowel to the flank.

Figure 4 shows the hypofusion and prolapse involving the cecum, ascending colon, hepatic flexure and splenic flexure, with consequent sag of the transverse colon. Hyperfusions are also well illustrated. Note the restraining bands, which, suspending the colon at the flexures, produce traction strains on the gallbladder and pylorus on the right side, and on the spleen and flank on the left.

In our series of patients operated on, we found irregular and abnormal adhesions of this type in the region of the hepatic flexure, in 67 per cent. of the cases, as compared with adhesions of the ascending colon in 53 per cent. of the cases. Harvey[2] found, on postmortem examination of 105 new-born children, thirty cases of adhesion in the upper region, and thirty cases in the lower region. It is evident, therefore, that the importance of the hepatic flexure, in relation to its hyperfusions, is equal to, if not greater than, that of the cecum and the ascending colon.

REPORT OF A CASE

CASE 11.—Mrs. H. H. P., aged 39, had suffered for twenty-five years from fatigue, jolting, and dragging pains throughout the right side of the abdomen, and occasionally in the splenic region. Moderate exertion would cause physical incapacity for several days at a time. For ten years she had been totally incapacitated for housework; for six years, attacks of persistent vomiting had followed any moderate exertion. During the previous year her condition had been deplorable. She was a woman of intelligence, and had consulted many physicians, and had received many diagnoses, and but little benefit. When she first consulted me, she had just completed a course in bed, with treatment for gastric ulcer. Her symptoms were better in bed, but returned as soon as she got up. She was thirty pounds below her best weight, and extremely anemic.

Under rest, postural and supporting treatment, for six months, she managed to retain enough nourishment to gain a few pounds in weight, and her hemoglobin increased from 55 to 70. She had not gained any during the past two months. As she had thus evidently reached her maximum improvement, an operation was performed for the cure of her visceroptosis. The following conditions were found:

Ptosis of the entire right side of the colon was present. The cecum was in the pelvis, being suspended by a band of adhesions, 1 inch wide, extending from the front of the ascending colon to the flank. The hepatic flexure was very movable and displaced downward and inward, and was supported by a span of adhesions, suspending it from the pylorus and duodenum. It was also kinked by a band of adhesions, uniting it to the transverse colon.

The splenic flexure was in normal position, but sharply angulated by a band of adhesions, attaching it to the spleen and to the left flank. The transverse colon was markedly prolapsed, and exerted a pull on the adhesions at the flexures. On division of these restraining bands, the hepatic flexure and the ascending colon presented a mesocolon 6 inches in width, permitting a very free range of motion. The hepatic

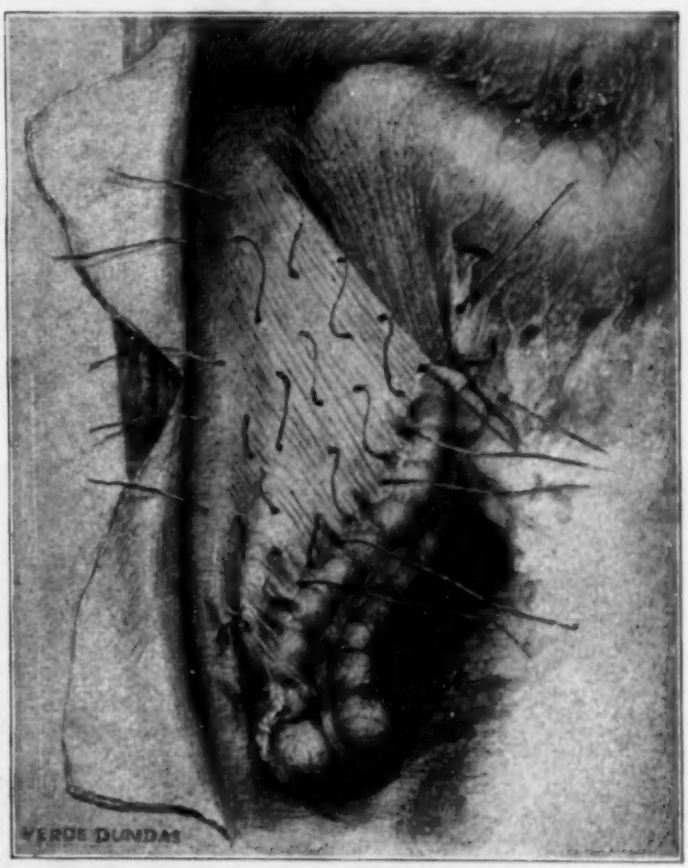

Fig. 6.—Operation: sutures applied and the first two tied; the bowel wall is not entered; the sutures terminate deep in the flank. Note the location of the renal and gastrocolic sutures.

2. Harvey, S. C.: Ann. Surg. 58:641 (June) 1918.

flexure could be displaced to the normal region of the splenic flexure, without traction. The technic described below was employed for the correction of the ptosis in this case.

This patient made an uneventful recovery, has not vomited since the operation, which was performed five years ago, and

Fig. 7.—Operation: The posterior or fusion sutures are tied. Note the easy curve of the flexures and the location of the gastrocolic sutures. Omental sutures for support of transverse colon are also shown.

gained 35 pounds in weight during the first seven months, and retains this weight now. She does all her housework and is 100 per cent. physically efficient. She enjoys better health than she had ever known before the operation (Figs. 14, 15 and 16).

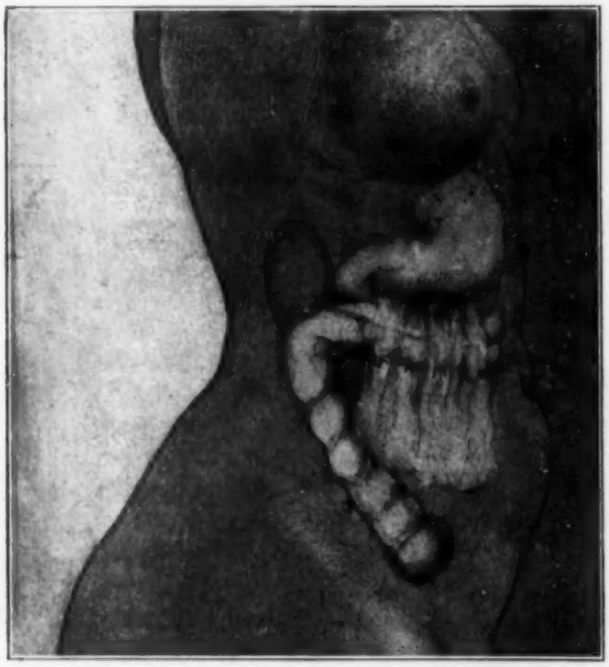

Fig. 8.—Operation: repair of the primary defect completed normal fusion established, with hepatic flexure well up and back, maintaining normal visceral equilibrium. Transverse colon, also, is here suspended.

TECHNIC OF THE OPERATION

1. *Repair of Primary Defects.*—The abdomen is opened in the median line, and a thorough inspection is made of the position of the viscera, and the location of the adhesions. The colon is then lifted out, by intestinal forceps, which grasp the anterior longitudinal muscle bundle. Its posterior attachments are now systematically inspected for areas of loose attachments, for irregular formations of constricting or restraining adhesion bands, and also for the finer strands of fibrous fasciculi, which are found in the outer layer of the mesocolon, and most numerously at and below the flexures.

This inspection, which is assisted by the palpating finger, passing along the outer aspect of the colon attachments, includes the entire colon, starting at the cecum and proceeding up the right side and down the left, with particular attention to its attachments in the kidney, hepatic, pyloric and splenic regions.

Adhesion bands are divided, when found to be harmful, and the colon is always freed of any constricting bands that are found to pass over the anterior longitudinal muscle bundle, at any point.

Figure 5 shows the ascending colon and the hepatic flexure freed of adhesion bands, and its mesocolon, containing numerous fibrous fasciculi, held in position ready for the application of the sutures.

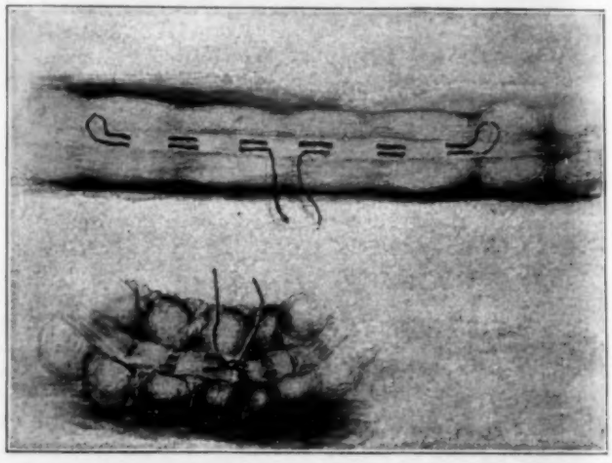

Fig. 9.—Operation: Secondary elongation of transverse colon; suture applied which, on tying, shortens the longitudinal muscle band, reproducing its sacculations.

Figure 6 shows a number of parallel sutures introduced into the mesocolon, beginning at the cecum. The needle at no place enters the bowel wall itself, but picks up the mesocolon close to the bowel. Thence, the needle is reintroduced several times, picking up all the fibrous fasciculi possible until the posterior wall of the flank is reached. At this point, a deep stitch is taken, which must include the firm iliac fascia below and the lumbar fascia above. The capsule of the kidney is included in the stitch coming from the beginning of the hepatic flexure. This stitch starts the forward curve of the flexure. When these sutures are tied, the mesocolon will be obliterated, the bowel will be replaced in its normal position, and firmly, evenly and uniformly attached to the flank.

In order to insure an easy, forward and inward curve to the hepatic flexure, a suture is now inserted in the edge of the gastrocolic omentum, and thence into the lateral abdominal wall, just beneath the liver. Similar sutures are placed at the splenic flexure, and descending colon, if needed.

It is an advantage, also, to take up any slackness of the transverse colon that may remain, either by plication of its mesocolon, or suspension by the hammock opera-

tion of Coffee. This guards against injury in the event of vomiting, and makes for better retention during the period of muscular adjustment, which follows, in the upper abdominal walls.

Figure 7 shows the position of the posterior stitches after tying, and of the gastrocolic and omental sutures, ready to be attached to the abdominal wall.

Figure 8 shows a side view after the stitches have been tied. This completes the repair of the primary and fundamental defects, by converting the malfusion into normal fusion, as it secures the uniform and even attachment of the portions of the bowel that normally should be fused to the back. Notice the posterior slant of the flank, and the colon lying firmly and evenly attached. The hepatic flexure now lies well back and high up under the liver, and curves smoothly and evenly over the lower pole of the kidney and duodenum as it passes forward and inward, to become the transverse colon, which is now seen in its normal position.

The static equilibrium of the abdominal viscera is now restored. Intra-abdominal pressure will exert its

Fig. 10.—Ptosis of both flexures and transverse colon; filling defects at flexures.

force obliquely on the ascending colon, which tends to retain the hepatic flexure in this position. The flexure now acts as a wedge lying beneath the liver, and tends to prevent its prolapse with consequent prolapse of the pylorus.

2. *Repair of Secondary Defects.*—If the transverse colon is atonic and much elongated, with the obliteration of its sacculations (Fig. 9), fine silk intestinal sutures may be inserted at intervals in the longitudinal muscle band, in such a manner, that on tying them, this band will be shortened by 2 inches with each stitch, with a reproduction of the sacculations.

Forward and downward rotation of the liver is a vital menace to our results, and must be corrected to insure proper space for the hepatic flexure replacement. It is remedied by its replacement and retention by means of two mattress sutures passing through its lower border and suspending it to the anterior abdominal wall.

Undue relaxation of the stomach may call for suspension, preferably by the operation of Rovsing.

We have devised a procedure by which ptosis of the kidney can be repaired from within the abdomen, by obliterating the opening in its capsule, through which its lower pole must descend and turn inward as it comes down:

A deep suture on a large needle is passed backward, through the peritoneum, close to the inner side

Fig. 11.—One year after operation: good position of both flexures and transverse colon, with easy curve and absence of filling defects at flexures.

of the lower pole of the kidney, down to and including the lumbar fascia, then outward and forward, close to the outer side of the lower pole of the kidney, and emerging from the peritoneum. On tying this suture, the opening in the capsule of the kidney is obliterated and, the kidney having been well replaced before applying the suture, the strands of the nephrocolic ligament of Longyear are secured to the lumbar fascia. This also aids in maintaining the proper position of the ascending colon.

Fig. 12.—Marked ptosis of stomach, and rotation of pylorus to median line.

RESULTS OF OPERATION

The average final results are among the most striking we encounter in surgical practice. Not only are the active symptoms relieved, but these patients are virtually reconstructed, physically, mentally and func-

tionally. Physical inefficiency and invalidism are replaced by ability to do work; fatigue and neurasthenia, by sound mind and nerves; constipation is improved, and the sallow complexion is replaced by the pink glow of good health. Many report a vigor

Fig. 13.—One year after operation: stomach at good elevation, and pylorus normally located to right.

and stamina which they never before had known, even in their earlier days.

The typical roentgen-ray findings, before and after operation, are well illustrated in a case as follows: Figure 10 shows the colon before operation, in which is seen a sharp angulation, ptosis, and filling defects, at both flexures, also marked ptosis of the transverse colon. Figure 11 shows the roentgen-ray examination

TABLE 1.—QUESTIONNAIRE REPORTS

	No. of Patients
Questionnaires returned	63
Verbal reports from family physician	14
Total number of patients heard from	77
Questionnaires not returned	2
Deaths	6
Total number of operations since which over one year has elapsed	85

TABLE 2.—FINAL REPORTS IN SEVENTY-SEVEN CASES

	No. of Patients	Percentage
Cured	44	57
Much improved	25	32.5
Total satisfactory results	69	89.5
Slightly improved	5	6.5
Not improved	3	4
Total results not satisfactory	8	10.5

of this colon one year after operation. The entire colon is seen to be in good position, with a free, smooth and easy turn at both flexures, absence of angulation and of filling defects, and good position of the transverse colon.

The stomach of this patient (Fig. 12) before operation is very low, and its outlet is in the median line. The examination of this stomach one year after operation (Fig. 13) shows it to be up in good position, and the pyloric outlet is located to the right, as it should be. This patient has enjoyed a complete symptomatic cure.

The changes in bodily poise and outline following operation are well illustrated in the photographs of Case 11 (Figs. 14, 15 and 16). (See report of case above.)

QUESTIONNAIRE REPORTS

A questionnaire covering general improvement, as well as a detail report, was sent out to all patients whose operation had been performed more than a year ago, from which returns the deductions presented in Table 1 have been made.

Eighty-eight per cent. of the patients report a gain in weight since operation. While seven patients report

TABLE 3.—RESULTS IN THE CASE OF SEVENTY-SEVEN PATIENTS ARRANGED IN GROUPS ACCORDING TO TIME SINCE OPERATION

Group	Years Since Op.	No. Cases	Results Satisfactory, % Cured	Much Imp.	Total	Results not Satisfactory, % Sl. Imp.	Not Imp.	Total
1	8½ to 3½	27	81.5	+ 15 = 96.5		3.5	+ 0 =	3.5
2	3½ to 2	25	60	+ 40 = 100		0	+ 0 =	0
3	2 to 1	25	28	+ 44 = 72		16	+ 12 =	28

loss in weight, this loss was due chiefly to other illnesses. The net results of sixty patients who reported their weights show an average gain for the entire group of 15⅓ pounds per patient. One half of these patients gained an average of 14 pounds over their best former weight. This gain in weight is a striking evidence of the improvement that has occurred in this group, as a whole.

PHYSICAL EFFICIENCY

Before operation, the average degree of this incapacity, per patient, was 45.7 per cent. The questionnaire returns show an average incapacity, per patient, of 0.09 per cent. since operation. In other words, the physical efficiency of the entire group has been almost completely restored.

That the improvement in these patients is often slow, but that their ultimate cure is permanent, is demonstrated by Table 3, which divides the cases into three

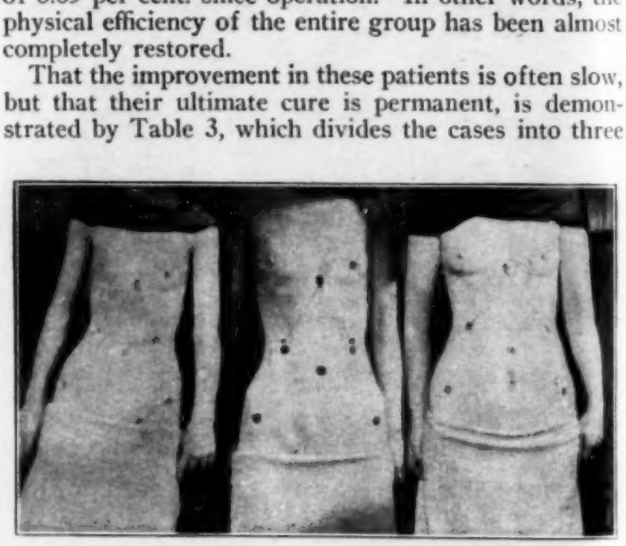

Fig. 14 (Case 11).—Before, three weeks after, and seven months after operation. Note improvement in weight, widening of costal angle, and collapse of right costal margin, after the malfusion has been corrected.

groups, of equal number, according to the time since operation, and compares the results in the different groups.

This table shows that practically all of the unsatisfactory results are found in the group of patients most recently operated on, being 28 per cent. in this group. After the two year period, however, the table shows that the unsatisfactory results amount to an average of only 1.75 per cent. Furthermore, the number of

absolute cures increases progressively with the increase in the time since operation, as seen by comparing the more recent with the older groups; the largest percentage of cures, 81.5, occurring in the oldest group of patients.

The questionnaire returns further show that 81.5 per cent. of the patients consider themselves as still improving; 18.5 per cent. consider themselves as stationary in their improvement, and none of them consider themselves to have been made worse through having undergone the operation.

Fig. 15 (Case 11).—Before, three weeks after, and seven months after operation. Note improved vigor, posture and poise, and the filling out of the hollow upper abdomen. Visceral equilibrium is restored.

ABSTRACT OF DISCUSSION

Dr. Robert T. Morris, New York: In order to discuss intelligently the subject of visceroptosis we must divide it into its various categories and consider the features of each. We are dealing with a group of defective patients, those who present stigmata, objective signs of arrested development of structure. It is almost impossible to place these patients back in good position as a unit in the social system, no matter what we do for them surgically or medically. Such patients have eyestrain, nonerupted molars, nasal hypertrophies and other sources for peripheral irritation. Another group represents changes in the anatomy because of the circumstances brought to bear. Structures develop resembling the kinks which Lane described, for example. Disturbances of the sympathetic ganglions of the autonomic and sympathetic systems which conduct digestion constitute a fourth category, perhaps, cases of psychoneuroses, mental depression and insanity; in fact, various end-results of conditions which are anatomically and functionally wrong. If the work which has been done by Dr. Hazen relieves a certain percentage of these patients let us do that work. For instance, I often fix the loose kidney. These patients have the sagging colon because of loose kidney. It can be fixed in ten or fifteen minutes so that it will stay in place permanently but it must be done in the right way. If you do not do these various operations as well as Dr. Hazen has done them, you are simply adding to the patient's troubles.

Dr. J. J. Gilbride, Philadelphia: It would not be possible in Philadelphia to operate on so large a number of patients as reported by Dr. Hazen because we know how to treat them better. Occasionally, some of our professors are misled into operating in some of these cases with disastrous results. I recall a patient complaining of severe pain in the right lower abdomen. She weighed about 95 pounds. One professor had taken out her appendix, another professor fixed the kidney and another professor did a curettage, while still another operated on her nose. Later, she consulted another professor and, of course, he dodged and recommended electrotherapeutics. Of course, she was an invalid. I did not want to operate as I did not believe I could do any good; however, I had a suspicion of an inclusion of the iliac hypogastric nerve within the scar of the kidney operation as causing the pain in the lower abdomen. The patient was a young woman and she and her aunt both persuaded me to operate on her. At operation I found the cause of the pain to be as I had anticipated, the inclusion of the nerve. She had complete relief. I put her on the treatment she should have had in the first place and a diet adapted to her gastrointestinal functions. She improved rapidly and in six months she had gained in weight so that she weighed 130 pounds.

Dr. J. Shelton Horsley, Richmond: The results obtained by Dr. Hazen have been excellent. It seems to me the reason all these patients are not cured is that toxic substances are absorbed and in the course of years this has a degenerating effect on nerve tissue, possibly on the sympathetic ganglions. Even after you effect a cure in the bowel function the changes in the sympathetic ganglions may be so great that the patient still has some of the neurasthenic symptoms; just as late operation for lesions of the brain does not cure epilepsy. I take it for granted that every case of stasis should be treated by a good medical man for at least six months before any operation is done. Should the patient not be cured, operation may be necessary. Coffey has demonstrated that the peritoneum is the strongest support within the abdomen. I have been doing a simple operation in cases of gastroptosis, a modification of Beyea's method. I start the suture on the left side, near the stomach wall, carry it up on the left side and return on the right side in a reverse direction and tie. This makes a purse string suture in strong tissue and avoids the thin peritoneum in the center of the gastrohepatic omentum.

Dr. Charles P. Noble, Philadelphia: There is no question that practically all these patients with ptosis are instances of arrested development from environmental causes. They are a separate group in the human family, and unless we look at them from that standpoint we fail to meet the situation. In a certain percentage of them mechanical surgery may afford relief from certain symptoms, but it does not alter the constitutional nature, and in order to secure good results in general they must be treated along physiologic lines. The general method is medicinal treatment followed by physical culture and outdoor life, and particularly the restriction of their activities within a much smaller amount of effort than is entirely physiologic for a normal individual. Unless that is done these people are always feeling sick. If the trouble is not in the intestines it is in the nervous system, and the varying symptoms simply show that they are expending more energy than they should. In other words, they are drawing on their potential nerve supply for ordinary use.

Fig. 16 (Case 11).—Before, three weeks after, and seven months after operation. Note improvement in constriction of the upper abdomen and prominence of the lower abdomen.

Dr. Ronald Hazen, Paris, Ill.: I realize that visceroptosis is a complicated condition to handle. With the male in the

upright position there has been delay in the fastening of the ascending and descending colon to the back. It is a change due to our change of state. The female has not followed that quite as perfectly; first, because of the primary law that the female does not follow change of structure; and, second, that her pelvis is larger than that of the male and her symptoms do not usually appear until a certain time. All this time the colon has been loose. The condition is similar to that of a man with a broken arch; he may not have symptoms until he is on his feet. He may have been doing desk work and is without symptoms until he is required to be on his feet. The general psychic and peripheral symptoms referred to are important and I have thought of the relation of the sympathetic ganglions with a bowel that is down and pulling on the sympathetic nerves. The wonder is that we do not have more reflex symptoms. In treatment I did not intend to advocate operation for every patient whose colon is down. Almost all these patients are patients referred by physicians who have done their best. We do not advocate operation. In fact, I should not want to advocate operation for general use. It should be done only by men particularly interested in this field of work because the general conception of the whole abnormality of the anatomy is so complicated that we cannot make the repair with any one method of operation. As Dr. Gilbride told us there is too great a tendency to operate without study. Thirteen per cent. of the patients in our series had had operations before we saw them, without relief. To repair a gastroptosis many factors have to be correlated to produce a satisfactory result.

AMPUTATION ABOVE THE LEVEL OF ARTERIAL OBSTRUCTION

IN ARTERIOSCLEROTIC GANGRENE

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The tendency of the majority of surgeons in selecting the level at which to amputate in arteriosclerotic gangrene is to be guided by the extent of the area of gangrene. Not infrequently, the amputation is followed by extensive sloughing of the flaps and either death follows from sepsis, or, as in a case recently observed by us, the opposite limb becomes involved as the result of the extension of the thrombosis from the femoral to the iliac artery and then across to the opposite iliac artery. We have felt that the ideal method of choosing the level at which to amputate would be to expose the femoral artery at the middle of the thigh and to follow it in an upward or downward direction until a level was reached at which the thrombotic occlusion of the artery ceased, and distinct pulsation could be observed in the vessel. We have pursued this plan in a recent case with very gratifying results.

REPORT OF CASE

A man, aged 56, was admitted to Michael Reese Hospital with marked evidences of arteriosclerosis and an area of gangrene involving the entire dorsum of the foot. There was an absence of pulsation in the arteries of the limb as high up as the upper femoral region. An amputation through the lower third of the thigh by the Gritti-Stokes method was decided on. On exposure of the femoral vessels at the middle of the thigh for purposes of preliminary ligation, we were greatly surprised to find the femoral artery completely occluded by a thrombus. Following the vessel in an upward direction we were unable to find any pulsation until close to Poupart's ligament (Fig. 1). At this level, the artery was ligated just above the occlusion, that is, through the lowermost pulsating portion. An amputation was performed at this level, and the patient, who had been extremely septic, made an uneventful recovery. In spite, however, of the high level at which the amputation was performed, there was moderate gangrene of the skin flaps. Dissection of the arteries of the limb revealed many calcareous areas in the femoral artery and a firm clot completely occluding its lumen (Fig. 2) up to a point close to the femoral canal. The clot was firmly adherent to the intima in many places and extended from the femoral into both tibial arteries. The veins were normal.

Fig. 1.—Extent of thrombosis in femoral and tibial arteries. Arrow points to level at which femoral artery was ligated proximal to upper level of thrombosis.

Fig. 2.—Femoral artery showing complete occlusion by thrombus, the upper level of which is at the dotted line. The thrombus extends into both tibial arteries. The arrow points to calcareous plaques on intima of artery.

COMMENT

We believe that exposure of the femoral artery in order to determine the upper limit of the occlusion is the simplest and most accurate method of deciding on the level at which amputation should be performed.

The Child's Food.—A growing child requires far more food than its weight would indicate. For, in the first place, its intake must exceed its expenditure, so that it may grow.—Julius H. Hess.

THE COURSE OF THE BLOOD CHANGES IN A CASE OF APLASTIC ANEMIA *

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Aplastic or aregeneratory anemia is the term applied to a well marked type of anemia due to decreased blood formation. Clinically it is marked by anemia, a pronounced tendency to hemorrhage, and a rapidly fatal course. Despite the severity of the anemia there are none of the evidences of bone marrow regeneration, such as megaloblasts, normoblasts, anisocytes, and stippled or basophilic erythrocytes in the circulation. At necropsy the red marrow is found to be aplastic, showing an increase of fat and a diminution in megaloblasts and normoblasts.

The disease is not so rare. Musser[1] collected reports of fifty-nine cases, including twenty-four of Cabot, and added another, which is probably the best studied case that has been reported.

The case that we present is reported on account of the remarkable opportunity it afforded for observing the progressive changes in the blood during the disease.

REPORT OF CASE

History.—L. H., man, aged 67, white, admitted to the hospital, July 15, complaining of weakness, had always enjoyed good general health except for constipation, for which he had taken cascara once or twice a week since youth. He had been a moderate drinker for many years. There had always been a tendency to bleed for long periods of time from cuts and scratches, but there had been no serious hemorrhage.

In 1910 he suffered from a "nervous breakdown." The systolic blood pressure was then 176. At that time exertion would occasionally bring on pain over the sternum which would run down the right arm, never down the left. During the illness he frequently took sulphonal. He made a perfect recovery.

Several years previous to his entrance into the hospital he suffered from glaucoma and the right eye was enucleated. Pilocarpin had been administered three times a day in the left eye since that time.

In March, 1919, four months before the present admission, the patient was in the hospital four weeks with "indigestion." The leukocyte count was 6,750. There was no marked pain. The roentgenogram was negative save for stasis in the large intestine. He apparently recovered from the indigestion, but became nervous and sleepless. He was still nervous and sleeping poorly at the onset of the present complaint. During the whole of this time, about four months, he took from 5 to 20 grains of barbital every night. His appetite was good. He urinated once at night; there was no obstruction.

Present Illness.—For about three weeks before admission, the patient had noticed that he was more easily tired by walking and climbing steps than formerly. July 14, he walked three or four blocks to dinner. On returning, which was slightly up hill, he became exhausted and had to rest several times on the curb. He was admitted to the hospital on the following day.

Physical Examination.—The patient was a rather old man, lying quietly in bed with a definite appearance of weakness. There was no emaciation. There was a very distinct pallor but no yellow tint to his skin. His musculature was extremely flabby. His speech was somewhat "thick." He was mentally active and alert.

Head: The right side of the face was distinctly smoother than the left, and his mouth was drawn to the left. However, he could whistle, and there appeared to be no weakness of the right side. The left pupil was small and did not react to light or accommodation (pilocarpin). The teeth, on which much dental work had been done, were in poor condition.

Glands: The posterior cervical and submaxillaries were palpable; the gland at the left angle of the jaw was enlarged. The axillaries were about the size of lima beans. The epitrochlears were not palpable, nor were the inguinals enlarged.

Chest: On percussion the lungs were found to be clear except at the right base, where the liver dulness was increased. The lower lung borders descended on inspiration, the left about 2½ fingerbreadths, the right somewhat less. The breath sounds were everywhere harsh. Crackling râles were present at both bases, more marked on the left. The cardiac dulness extended from the third rib above to just outside the midclavicular line. The point of maximal impulse was in the fifth interspace, a little outside the midclavicular line. At the apex the first sound was muffled and followed by a blowing murmur. The systolic murmur was present also at the base, but not transmitted. The pulmonic second sound was clear and not accentuated. The aortic second was clear and a bit accentuated. The pulse was good and could be felt equally at both wrists.

Abdomen: The abdominal wall, like that of the chest, was flabby, and the pressure of the bell of the stethoscope left a slight imprint.

Lower extremities: The musculature was flabby.

Rectal examination: The prostate was slightly enlarged. There was normal resiliency.

Nervous: There was lateral nystagmus; the eye movements were otherwise good. In other respects the examination was negative.

Blood: The blood was pale. At the prick of a needle the patient bled very freely. The red cell count was 2,240,000; the color was good; there was no anisocytosis or poikilocytosis. There was no stippling, polychromatophilia, or nucleated forms. Only four or five platelets were seen in a smear. The hemoglobin was 55 per cent (Tallqvist). The leukocyte count was 3,000; polymorphonuclears, 43 per cent; eosinophils, 2 per cent; lymphocytes, 53 per cent; large mononuclears and transitionals, 2 per cent.

Urine: The urine was pale; the specific gravity was 1,013. There was a faint trace of albumin. There were a few granular casts and cylindroids; there was a little mucus, and an occasional white cell.

Clinical Course.—The disease was rapidly progressive. The patient became weaker and weaker. He slept considerably and was irritable when awake. On the second day after admission, petechial hemorrhages appeared on the legs. They increased on the following day, but quickly cleared up after the first transfusion. Two transfusions of 600 c.c. and 550 c.c., respectively, were made by the citrate method, on the seventh and twelfth days after his admission. There was a febrile reaction after each of the transfusions; the temperature was 102.5 F. after the first transfusion and 101.5 F. after the second, but he had no chills. When the patient had recovered from the reaction, he said he felt better for about twenty-four hours, but there was no visible improvement. Five days after the second transfusion, petechial hemorrhages again appeared over the body as well as over the extremities. On the following day, the sixteenth day after admission, the temperature rose from normal to 101 F. and there was considerable bleeding from the gums. The temperature continued between 101 and 102 F., and bleeding from the gums continued until the patient's death. He was never ataxic, and was rational almost to the last. On the day of his death there was a slight hemorrhage from the rectum. He died on the nineteenth day after his admission.

* From the Naval Hospital and Medical School.

1. Musser, J. H., Jr.: Study of a Case of Aplastic Anemia, Arch. Int. Med. **14**: 275 (Aug.) 1914.

Laboratory Examinations During Stay in Hospital.—The blood culture and Noguchi reactions were negative. The urine was constantly pale and contained no blood, bilirubin, urobilin or hematoporphyrin on repeated examination. There was usually a trace of albumin.

Blood: The duration of bleeding from a prick of the finger was longer than normal. After transfusion, this was not so evident. Toward the last, slight pinching of the lobe of the ear resulted in a bruise.

Coagulation time, tested in capillary pipets, was within normal limits: from ear puncture it was two and two thirds minutes, from a vein it was nine minutes.

Hemoglobin estimations made with the Tallqvist and Sahli methods showed considerable variation, probably due to the low figures encountered. Two estimations were made by the Van Slyke method of determining the oxygen carrying capacity of the blood. The first, made the seventh day after admission, gave 30 per cent. (estimating 14 gm. per hundred c.c. as normal) and a color index of 0.84. The second, made the twelfth day after admission and four days after the first transfusion, gave 30.6 per cent. and a color index of 0.74.

The fragility of the red corpuscles, tested with hypertonic salt solutions, showed no increase. With the patient's corpuscles, hemolysis began at 0.44 per cent. and was complete at 0.34 per cent.; with the control's corpuscles, hemolysis began at 0.46 per cent., and was complete at 0.34 per cent.

The results of the chemical examination of the blood on the twelfth day after admission, per hundred c.c., were: blood sugar, 121 mg.; nonprotein nitrogen, 50 mg.; urea nitrogen, 15 gm.; creatinin, 2.14 mg.; plasma carbon dioxid, 48.1 per cent. (Van Slyke); plasma: no bilirubin, no urobilin.

The variation in the number of red cells is shown in Chart 1 (upper division.)[2] It varied widely between 2,400,000 and 1,600,000. After each transfusion there was a marked increase which lasted four or five days. Probably on account of the transfusions there was no general trend downward. The day before death, the count was not so low as it had been in the earlier days of the disease.

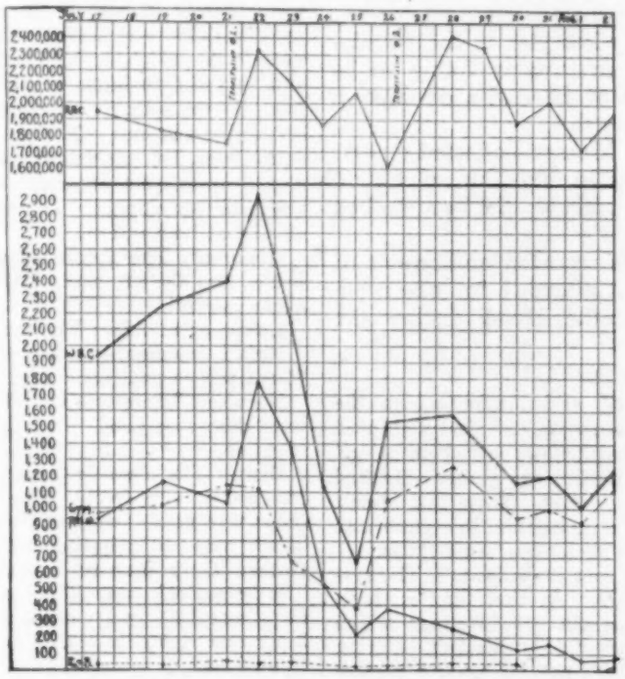

Chart 1.—Variations in the red cell count (upper division) and in the absolute numbers of the different leukocytes (lower division) in a case of aplastic anemia: parallel lines indicate total leukocytes; solid line, polymorphonuclear neutrophils; line of dots and dashes, lymphocytes; broken line, eosinophils and basophils.

There were never at any time abnormal forms of red cells observed. There was no poikilocytosis and no anisocytosis. Occasionally a cell would be seen of 6.5 microns in diameter and there were a few of 8.5 microns, but no greater variations. There were no polychromatophilia, no stippling, and no nucleated forms were seen. On the second day of admission, four or five platelets were seen in each blood smear. After that, they were constantly absent.

There was a marked leukopenia, the leukocyte count varying widely between 3,000 and 650. The leukocyte curve is shown in Chart 1 (lower division).[2] It begins with a count of 1,950 and ends with a count of 1,250. No abnormal forms of white cells were encountered. Practically all fell into the general classification. The course of the differential counts is shown in Chart 2 (upper division). At the beginning, the polymorphonuclear cells and the lymphocytes were present in about equal percentages. The percentage of lymphocytes steadily increased, while that of the polymorphonuclear cells steadily decreased so that toward the last the lymphocytes reached 92 per cent. and the polymorphonuclear cells dropped to 6 per cent.

Necropsy.—Only a partial necropsy was obtained. The liver was enlarged and liard, and sections showed cloudy swelling with a slight increase of connective tissue. There was considerable bile pigment, but special staining failed to demonstrate hemosiderin. The rib, when cut across, showed a small area of light red marrow. Smears from this showed few cells, mainly small mononuclears and red cells. Sections showed large vacuoles, formerly occupied by fat, with narrow strands of marrow tissue between. The marrow tissue was composed mainly of small mononuclears (lymphocytes) with a few non-nucleated red cells and an occasional myelocyte. No mention is made of the predominance of the lymphocytes in most of the necropsy abstracts reported, but it was observed by Hirschfeld.[3] Compared with the marrow of a normal rib, there did not appear to be an increase of lymphocytes but rather a marked diminution of myelocytes and nucleated red forms with a tremendous increase of fat, while the lymphocytes were unaffected and remained in normal numbers.

COMMENT

The value of the case in the study of aplastic anemia may be briefly discussed.

Etiology.—In the fifty-nine instances that Musser[1] collected, the great majority of the patients were under 35 years of age; he doubts the authenticity of a case at 68. That aplastic anemia may occur at a more advanced age is verified by the present case at 67. There were no evidences of intestinal parasites, as in the case reported by Stitt,[4] nor of benzene poisoning, as in the cases reported by Selling,[5] nor of suppuration, as in the cases reported by Dalton.[6] Of other factors present, sulphonal, barbital, alcohol and chronic constipation, none could be implicated in an etiologic rôle. As in the vast majority of cases of aplastic anemia, in this case no exciting cause could be found.

Course and Complications.—Four months before the patient's admission nothing in his general condition suggested anemia, but the leukocyte count was on the lower level of normal, 6,750. From the patient's history the duration of the disease was probably between five and six weeks. Certain it is that the disease was not very evident clinically for more than three weeks.

The significance of the fever is uncertain. Fever is given as quite a prominent symptom of the disease by

2. The count on admission is not given in the charts.

3. Hirschfeld, H.: Folia haematol. **12**: 350 1911.

4. Stitt, E. R.: Aplastic Pernicious Anemia Associated with Anchylostomiasis, U. S. Nav. Bull. **5**: 345, 1911.

5. Selling, L.: A Preliminary Report of Some Cases of Purpura Hemorrhagica Due to Benzol Poisoning, Bull. Johns Hopkins Hosp. **21**: 31, 1910.

6. Dalton, N.: Two Cases of Malignant Anemia, without Signs of Erythrocytolysis and Associated with Suppuration About the Jaws, Tr. Clin. Soc. London, **37**: 101, 1904.

Musser,[1] while less stress is laid on its occurrence by Cabot[7] and Lavenson.[8] In the present case, fever was present only during the last four days of the disease, and the temperature was never above 102 F. The persistence of râles at the bases of the lungs during the latter part of the disease would suggest a terminal pulmonary infection. If the resistance to infection were reduced *pari passu* with reduction in the number of polymorphonuclear neutrophils, it must have been exceedingly low when they were present in less than 5 per cent. of their normal numbers. The fever had no effect in increasing the leukocyte count.

Subcutaneous hemorrhages and hemorrhages from the mucous membranes are characteristics of the disease rather than complications.[9] Both were evident in the present case, but were not so severe as to affect either the clinical course or the blood picture of the disease.

Pathogenesis.—The absence of immature red cells in the circulation and the absence of bile pigments in the skin, urine, and blood plasma, and the absence of hemosiderin in the liver tend to confirm the prevalent conception that the anemia is due to failure in formation and not to abnormal destruction of red blood cells.[10] The persistence of the red cell count at about the same figure as on admission, despite the rapid progress to fatal termination, is not a constant feature of the disease. In the case of Stitt,[4] the red count fell to 490,000 on the day of death. In the present case, the red count was probably kept up by the transfusions. According to the work of Ashby,[11] transfused cells live and function, and are therefore of value to the general body economy. Such persistence of the red cell count raises doubt as to the anemia being the essential factor in the disease. Cabot[12] raises a similar query in regard to pernicious anemia. The other bacteriologic and chemical examinations, blood culture, blood sugar, nonprotein nitrogen, urea nitrogen, creatinin and carbon dioxid content of the blood plasma, gave no lead.

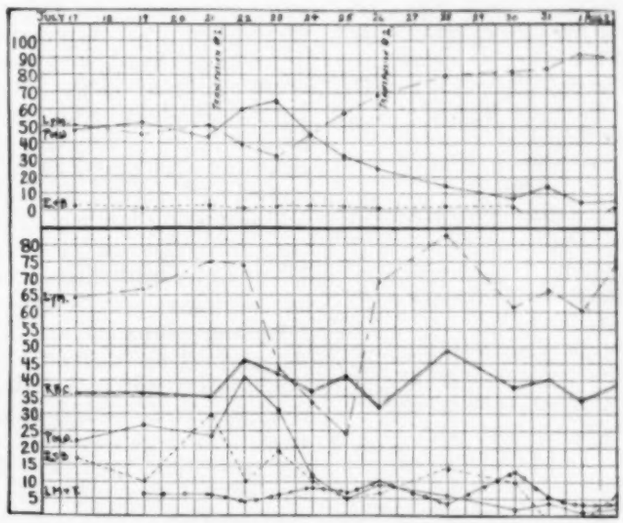

Chart 2.—Variations in the relative leukocyte counts (upper division): solid line, polymorphonuclear neutrophils; line of dots and dashes, lymphocytes; broken lines, eosinophils and basophils Various blood cells in percentages of the normal (lower division): parallel lines, red blood cells; solid line, polymorphonuclear neutrophils; line of dots and dashes, lymphocytes; broken line, eosinophils and basophils; line of dashes and hollow dots, large mononuclears and transitionals.

The estimations of hemoglobin were made on the oxygen carrying capacity of the blood and therefore approach accuracy. At the two estimations the hemoglobin was about the same, but the color index fell from 0.84 to 0.74. This was associated with quite definite progress in the disease and is of interest in contrast to pernicious anemia, in which the color index rises as the disease progresses.[13]

The leukopenia in the present case is quite a constant feature of the disease. In Chart 1 (lower division) the course of the leukocytes, the lymphocytes and polymorphonuclears in actual numbers per cubic millimeter is shown. The total leukocyte curve shows marked variations that can be divided into those due to the transfusions and those due to the course of the disease. After the first transfusion there was an increase of about 600 cells per cubic millimeter, due mainly to an increase in polymorphonuclear neutrophils. But this increase was extremely transient, lasting only twenty-four hours. Possibly a similar increase occurred after the second transfusion but was not detected, as no count was made within forty-eight hours.

The downward course of the leukocyte curve is independent of the transfusions. This progressive decrease is in contrast to the red cell curve, as shown in Chart 1 (upper division) which, probably on account of the transfusions, maintained its height to the end. This feature of the leukocytes can be seen to be entirely due to a progressive reduction in the polymorphonuclear elements of myeloid origin, for, if the temporary drop which occurred between the transfusions is ignored, the lymphocytes maintained quite a constant level to the end. The drop in the leukocytes which occurred after the first transfusion and was partially recovered from before the second transfusion is likewise, in all probability, due to the disease and independent of the transfusions. It was due partly to a diminution in lymphocytes, but mainly to a diminution in polymorphonuclears. After it the polymorphonuclears continued to decrease rapidly and progressively, while the lymphocytes made a rapid and good recovery, which they maintained.

The course of the differential counts did not confirm the prevalent opinion that the cells of myeloid origin are the only ones to suffer.[14] To ascertain how each cell had suffered it was necessary to compare the actual number per cubic millimeter present in the disease with the actual number per cubic millimeter present in normal blood. The only previous count which we had of the patient was a leukocyte count of 6,750. If that is taken as normal, and the normal percentages as given by Sydney Miller[15] are assumed—polymorphonuclears 64.2 per cent.; eosinophils and basophils 3.4

7. Cabot, R. C.: Diseases of the Blood, in Osler and McCrae: Modern Medicine, Philadelphia, Lea and Febiger, **4**: 640, 1915.
8. Lavenson, R. S.: The Nature of Aplastic Anemia and Its Relation to Other Anemias, Am. J. M. Sc. **133**: 100, 1907.
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11. Ashby, W.: Determination of Length of Life of Transfused Corpuscles in Man, J. Exper. Med.: **29**: 267 (March) 1919.
12. Cabot, R. C.: Diseases of the Blood, in Osler and McCrae: Modern Medicine, Philadelphia, Lea and Febiger, **4**: 627, 1908.
13. Cabot, R. C.: Diseases of the Blood, in Osler and McCrae: Modern Medicine, Philadelphia, Lea and Febiger, **4**: 637, 1915.
14. Lavenson, R. S.: The Nature of Aplastic Anemia and Its Relation to Other Anemias, Am. J. M. Sc. **133**: 100, 1907. Barker, L. F., in Monographic Medicine, New York, D. Appleton & Co., **3**: 200, 1916.
15. Miller, Sydney, quoted by Barker, L. F., in Monographic Medicine, New York, D. Appleton & Co., **3**: 27, 1916.

per cent.; lymphocytes 22.5 per cent., and large mononuclears and transitionals 10.8 per cent.—the following numbers represent 100 per cent. in Chart 2 (lower division): for polymorphonuclear neutrophils, 4,334; for eosinophils and basophils, 230; for large mononuclears and transitionals, 729; for lymphocytes, 1,518, and for red cells, 5,000,000. It will be seen that every type of cell suffered, but the lymphocytes suffered least. The polymorphonuclear cells, including the neutrophils, eosinophils and basophils, suffered markedly and progressively. The platelets were absent except at the earliest observation.

THERAPY

The patient was transfused twice. The petechial hemorrhages cleared up after the first transfusion, but there was no other benefit evident clinically. Each transfusion increased the red cell count, which did not return to its former level for five days. The transfusions probably account for the way in which the red counts maintained their level; but they were at no time followed by evidence of bone marrow stimulation. The effect of the transfusions on the white count was extremely transient. The effect on the downward course of the polymorphonuclear cells was of little consequence, an elevation after the first lasting forty-eight hours, but none after the second.

SUMMARY

In a case of aplastic anemia, the diagnosis was based on the anemia, the absence of abnormal red cells in the circulation, and the aplastic red marrow at necropsy. There was no evidence of increased hemolysis.

The red cells were reduced to about 1,800,000. They were only temporarily increased by transfusions, and they continued in about their original numbers to the end. The platelets were practically absent.

The color index was below 1, and dropped as the disease progressed.

There was an actual reduction in all the leukocytic elements of the blood, more marked in those of myeloid origin. Those of myeloid origin were the only elements to show progressive diminution in numbers.

China Medical Board Report.—The fourth annual report of the Rockefeller Foundation, China Medical Board, for 1918, includes the report of the trustees of the Peking Union Medical College and the Shanghai Medical School of the Rockefeller Foundation. During the year, construction work on the buildings of the Peking Union Medical College went forward, the total number of members of the faculty proper was increased to thirty-four, and contributions were paid to nineteen hospitals, three medical schools, and sixty-five fellow scholars. Building activities at Shanghai have been postponed until the completion of the Peking School, on account of the unfavorable exchange and the increased cost of building materials. A gift of $5,500 is reported from the Harvard Medical School in China, to be used toward the endowment of the Shanghai Medical School. Payments have been continued on the former appropriations to the medical schools of Yale, St. John's University, and Shantung Christian University. The largest appropriation of the new hospital was that to St. James Hospital at Nanking. Appropriations have also been made for the Foreign Christian Missionary Society at Luchowfu. The total expenditures of the board for the year amounted to $2,131,588, distributed as follows: administration, $45,676; Peking Union Medical College, $1,735,983; Shanghai Medical School, $114,261; appropriations to missionary hospitals, $123,686; appropriations to missionary medical schools, $67,549; fellowships and scholarships, $51,575, and miscellaneous, $2,757.

INFLUENCE OF PITUITARY EXTRACTS ON THE GENITAL TRACT*

ROBERT T. FRANK, M.D.
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During the course of an investigation of the physiologic properties of the lipoid constituents of the various endocrine glands, a study of the effect of the anterior lobe of the pituitary body on the growth of the genital tract was undertaken. This work was completed in 1917, but for extraneous reasons has not been published until now.

Various investigators have obtained divers results from the feeding of the anterior lobe extracts to different varieties of animals, such as rats, rabbits and dogs. Among these investigators may be mentioned Sandri, A. E. Schaefer, T. B. Robertson and E. Goetsch. Robertson and Goetsch, the former using a purified extract which he denominates tethelin, and the latter the dry extract of the anterior lobe, claim to have obtained increase in body growth and stimulation of the genital tract in animals. The growth-producing effect of hypophysis extract appears to have been generally accepted in the literature, and the extract has been applied in some instances to the treatment of human beings. It seems well worth while to publish the results obtained by a series of experiments conducted with all due precautions on white rats

Considering it likely from the perusal of the literature that anterior lobe extracts actually cause increase in growth and stimulation of the genital tract, a series of experiments was conducted in order to determine what constituents of the pituitary extract produced these phenomena. Through the kindness of the laboratories of Parke, Davis & Co., four extracts were obtained. These consisted of the following portions of the gland: Extract No. 1 of anterior and posterior lobe in proportion of 1 to 6 desiccated; Extract No. 2 of pituitary free from fat soluble substances; Extract No. 3 of pituitary containing only fat soluble substances; Extract No. 4 of anterior lobe only desiccated and diluted with lactose to prevent decomposition.

Six litters of white rats raised in the laboratory were used in the course of these experiments. The rats were 3 weeks old when the experiments were begun. Litters 1 and 2 were composed of six sisters each; Litters 3 and 4 of five sisters each; Litter 5 of three sisters, and Litter 6 of four sisters. In each litter at least one animal was selected as control. For thirty-five consecutive days each animal (except the control) was fed with 0.05 gm. of pituitary, given in a bolus composed of meat, egg and cream cheese, which was eagerly taken. In order to round out the diet, the animals were also fed with milk, greens and oats. Throughout the experiments all the animals, except No. 4 of Litter 6, showed progressive increase in growth.

At the necropsy, it was found that no concordant increase in size or in general body weight, or in the genital organs ascribable to the glandular feeding was present. Irrespective of whether experimental animal or control, certain rats showed a greater increase of weight, the presence of corpora lutea in the ovaries, and enlargement of the other internal genitals.

* From Columbia University, George Crocker Special Research Fund, F. C. Wood director.

According to Goetsch's report, animals of this age (56 days) should show no corpora lutea unless stimulated by the extracts. Possibly his results were accidental, as the individual series contained few animals; or possibly the season of the year may have had some influence, because in his experiments most of the animals were fed during the early months of spring; or, again, possibly individual breeds show premature maturity.

CONCLUSION

It may be said that more extended experiments along these lines will be necessary before stimulation of the sex organs, at least of the female sex organs, can be ascribed to the use of pituitary extracts. The practice of at once applying unconfirmed results obtained in the laboratory to clinical practice is pernicious. In no field has it been more abused than in that of "endocrinology." If this practice continues unchecked, organotherapy will fall into disrepute both in the opinion of the medical profession and in that of the public.

THE SPINAL FLUID IN PRIMARY AND SECONDARY SYPHILIS

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This study was undertaken with the idea of determining so far as possible what percentage of cases of primary and secondary syphilis would show infection of the cerebrospinal fluid as might be demonstrated by the usual laboratory methods.

The tests made on each specimen of spinal fluid were the Wassermann reaction, protein determination and cell count. In every case, comparison of the blood Wassermann has been made with the findings in the spinal fluid. The duration of the disease, the present signs of syphilis and previous treatment have also been taken into consideration.

These studies were made in a series of ninety-one cases. The majority of the patients were either in the primary or the secondary stage of syphilis. The lesions manifested varied from early chancre to a fading secondary rash. A few of them, however, were well past the secondary stage. There was only one out of every four or five cases in which any previous treatment had been given, and that was usually a very small amount.

All of these cases gave a ++++ Wassermann reaction of the blood serum, as this was one of the determining factors whether or not studies would be made of the spinal fluid.

The cell count was made immediately on removal of the spinal fluid. The average number of cells per cubic millimeter was nine. No effort was made to classify them. The greatest number of cells per cubic millimeter for any one specimen was seventeen. One of these was a case presenting a chancre of the lip with marked glandular involvement but no secondary rash. The others were cases of well marked secondary syphilis. If a cell count of five per cubic millimeter is taken as the average in normal spinal fluids, practically all of these cases showed a slight abnormality. The percentage of cases of secondary syphilis showing changes in the spinal fluid has been given as from 10 to 90. If we may consider a slight increase in cells an abnormality, then undoubtedly a large number of the primary and secondary cases of syphilis would show abnormal spinal fluid. This, however, must be regarded as only of suggestive significance, as there are a number of conditions that may produce an increase in cells. Then, again, we have to admit that cell counting is subject to error.

Only two of these cases showed a slight excess of protein in the cerebrospinal fluid, and curiously enough one of these was in the chancre stage. The other was one of two years' duration. Very little treatment had been given in either case.

In performing the Wassermann reaction of the spinal fluid, 0.6 c.c. was used, 0.2 c.c. being the usual amount. The increased amount of fluid had no effect on the reaction.

I might say at this time that the vast majority of these patients suffered from lumbar puncture headache despite the fact that they remained in bed from three to four days following the operation. The amount of fluid withdrawn never exceeded from 3 to 4 c.c. The intensity and duration of the headache varied a great deal in different persons. Although this was troublesome and annoying, no serious complications followed.

It might have been more interesting if we had made more than one examination of the cerebrospinal fluid at different periods of the disease. However, I did not feel justified in doing this, considering the discomfort that it caused the patient and what it promised in return.

In making the lumbar puncture, 2 per cent. cocain was used to anesthetize the skin. This was a great help in reducing the immediate discomfort of the puncture. The introduction of physiologic sodium chlorid solution into the spinal canal to replace the amount of spinal fluid removed was considered but was not done.

What percentage of those infected with syphilis will develop symptoms of the nervous system has been a field of much speculative theorizing and has been variously estimated at from 9 to 25. A great deal of time and energy have been spent trying to determine the class of cases that will develop neurosyphilis and at what time in life. The explanations that have been offered are familiar to us all.

It has been said by some that the papular variety of syphilis was more likely to give a positive Wassermann reaction of the spinal fluid. This has not been true in my series.

Others have thought that there must be a difference in the virulence of the spirochete flourishing in different parts of the world. In this series a number of countries were represented, namely, England, France, Ireland, Italy, Portugal, Wales, and all parts of the United States. Notwithstanding the number of places from which the infections came, there was no noticeable difference in them so far as the laboratory studies were concerned. Clinically, the cases from abroad usually presented more marked secondary manifestations, but as a rule they had gone longer untreated.

CONCLUSIONS

1. There is a slight increase of lymphocytes in the cerebrospinal fluid in the majority of cases of primary and secondary syphilis.

2. The increase in protein content does not appear as early as the increase in lymphocytes.

3. In this series not a single ++++ Wassermann reaction was obtained on the spinal fluid in primary and secondary syphilis.

4. It does not seem reasonable to conclude that we can determine by the examinations of the cerebrospinal fluid in cases of florid syphilis just who is going to develop symptoms of the central nervous system.

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Clinical Notes, Suggestions, and New Instruments

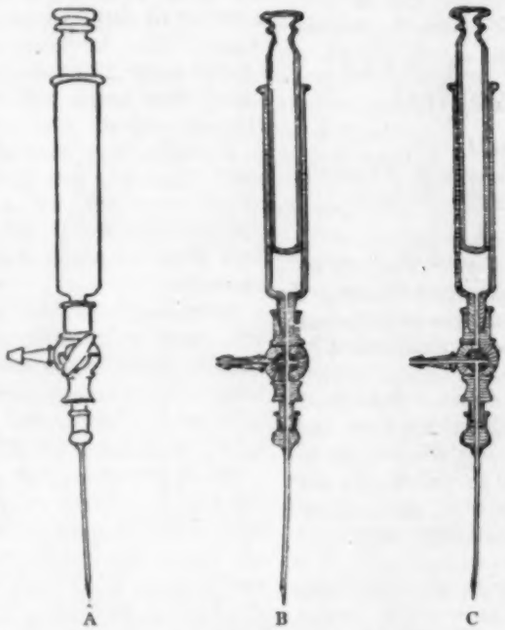
A SIMPLIFIED METHOD FOR INDUCING THERAPEUTIC PNEUMOTHORAX *

JOSEPH ROSENBLATT, M.D., BEDFORD HILLS, N. Y.

The usual procedure employed in the induction of therapeutic pneumothorax consists of two steps: First, a local anesthetic is injected into the skin, subcutaneous tissue, and pleura; second, a special needle is inserted through which the gas is introduced.

About four years ago, Dr. Alfred Meyer[1] suggested that the operation could be much simplified by introducing the gas through the same needle with which the local anesthetic is injected. He accomplishes this by disconnecting the syringe from the needle and slipping the rubber tubing leading to the gas apparatus over the butt of the needle, or by attaching the rubber tubing to the needle by means of an adapter. Working under the direction of Dr. Meyer, we have been using this method for some time in primary inflations as well as in refills, and it has proved to be quite satisfactory. Recently Gammons[2] and others have reported that they have been using this method in refills with satisfaction.

An objection that has been raised to this method is that while the syringe is being detached from the needle and the rubber tubing attached to it, the lumen of the needle is for a short time exposed to the atmosphere, and some unfiltered air may then enter the pleural cavity. Another, and more serious, though far-fetched objection is, that should the point of the needle happen to be in a pulmonary vein, where the pressure is negative, some air may be aspirated into the vein while the lumen of the needle is exposed to the atmosphere, and air embolus may ensue.



Syringe for use in artificial pneumothorax: *A*, syringe, stopcock and needle ready for use; *B*, valve of stopcock arranged for injection of anesthetic; *C*, valve turned for introduction of gas.

AUTHOR'S METHOD

In order to obviate these objections and at the same time render the operation much simpler and easier, I have devised a method by which the gas can be introduced through the anesthetic needle without, at any time, opening the lumen of the needle to the atmospheric air and without any difficult manipulation. My method consists in inserting between the syringe and needle that are used for injecting the local anesthetic a two-way stopcock similar to the one sometimes used for aspiration and ejection of pleural effusions. One end of this stopcock fits the point of the syringe and the other end fits the needle. A branch extends from the side of the stopcock to which can be attached the rubber tubing leading to the gas apparatus. The stopcock is also provided with a two-way valve so arranged that when the valve is turned one way, the needle communicates with the syringe for drawing up and injecting the local anesthetic, and when it is turned the other way, the needle is communicating with the side-branch leading to the gas apparatus. The stopcock can be made to fit any type of syringe and needle, but we found it best to use an all glass Lüer syringe and a sharp steel needle, 1¼ inches long and from 21 to 22 gage.

The technic is very simple. First, the stopcock is set so that the needle is communicating with the syringe, and the local anesthetic is drawn up and injected in the usual manner. When the operator thinks he has pierced the parietal pleura, the rubber tubing leading to the gas apparatus is connected to the side-branch of the stopcock, and then a quarter turn of the stopcock valve puts the needle in communication with the rubber tubing leading to the manometer and gas bottle, so that the manometer can be read and the gas introduced.

The syringe may be left in place, but we found it advisable to withdraw partly the piston of the syringe as soon as the anesthetic is injected, so that the fluid that remains in the lumen of the needle is aspirated back into the barrel of the syringe, leaving the needle clear. Moreover, this simple procedure of partly withdrawing the piston of the syringe frequently gives us valuable information as to where the point of the needle is located. If the point of the needle is engaged in tissue, as soon as the piston is released it will be drawn back forcibly into the barrel of the syringe, as if the finger were held over the point of the syringe while the piston is withdrawn. This usually indicates that the needle is not deep enough. If the piston falls back by gravity, the point of the needle is in a free space, either in the pleural cavity or in the lung; and if satisfactory manometric oscillations cannot be obtained, the indications are that the needle is too deep, and it should be withdrawn somewhat. Should blood come up into the syringe when the piston is partly withdrawn, the point of the needle is in a blood vessel, and then it is best to withdraw the needle and insert it in another place.

We have been using this method for about two years in primary operations as well as in refills, having performed thirty-five primary operations and about 350 refills, and we have found it perfectly satisfactory. Among the primary cases, we had a number that were very unpromising from the standpoint of physical signs and roentgenographic findings; yet we have been successful in all but one case, and in the great majority we succeeded in inducing pneumothorax with the first attempt.

There are two objections that might possibly be raised to this method as well as to other methods in which a small, sharp needle is used. First, some claim that a sharp needle is more likely to penetrate and wound the lung than a large, dull needle; secondly, this needle has no obturator and one may think that it is easily blocked up. As a matter of fact, however, even if a small needle should pierce the lung substance, it is very unlikely that lung tissue will be damaged or that spontaneous pneumothorax will result, while a dull, heavy needle is more likely to cause laceration if it pierces the lung. Furthermore, even those who use a large needle for introducing gas also use a small, sharp needle for injecting the anesthetic, and this is practically what the entire operation

* From the Montefiore Home Country Sanatorium, Bedford Hills, N. Y., and the Sanatorium of the Jewish Consumptives' Relief Society, Edgewater, Colo.

1. Meyer, A.: Tr. Nat. Assn. Study & Prev. Tuberc. **11**: 202, 1915.
2. Gammons, H. F.: Improved Method for Refilling in Artificial Pneumothorax, J. A. M. A. **72**: 843 (March 23) 1918.

consists of with our method. As to the absence of an obturator, if the needle is small and sharp it is not likely to be blocked up with tissue, especially in this case in which the anesthetic fluid, being forced through the needle, acts like an obturator. Should the needle become blocked up with a drop of blood, it can easily be dislodged by moving the piston gently up and down, or a small amount of anesthetic fluid may be retained in the syringe and then forced through the needle whenever it becomes necessary to clear it. At any rate, we hardly ever had any trouble due to a blocked needle.

ADVANTAGES

The advantages of this method over the two-puncture method are obvious:

1. The operation is rendered much simpler and easier.
2. The amount of trauma to the pleura is greatly minimized, and so pleural shock is less likely to occur. Though the cause of pleural shock is not well known, yet judging from what is known about shock in general, it is reasonable to suppose that pleural shock is less likely to occur when the pleura is punctured with a small needle than when it is pierced with a dull trocar and cannula.
3. Subcutaneous emphysema is less frequent.
4. The patients do not dread the operation so much when this method is used, as they consider it of a minor character, and it is well known that the state of mind of the patient is an important factor in the success of the treatment.

INFLUENZA AND EPILEPTIFORM ATTACKS

L. PIERCE CLARK, M.D., NEW YORK

Since no case has yet been recorded in which epilepsy or epileptiform attacks have apparently been initiated by influenza, a case of this type may be worthy of brief mention. It is the only one of which I am aware.

REPORT OF CASE

A boy, aged 2 years, with an unimportant family and personal history, contracted a severe attack of influenza in January, 1919. He had a temperature as high as 104. The disorder was initiated by general convulsions which endured for several hours. The fever lasted four days. A week later, after a normal temperature for two days, he again had a fever of from 104 to 106 but without convulsions, and pneumonia developed. He was ill ten days, and two weeks after recovering he began having almost daily both grand mal and petit mal attacks. He had a persistent cough and was physically prostrated for several weeks. He slept poorly, was irritable, and did not gain in weight. The convulsions seemed to have been rendered worse by the advent of dentition. When this was completed, in July, however, the attacks began to appear daily (as many as fourteen a day) in spite of fair physical health, and without any other obvious cause. The whole mental development ceased at the onset of the influenza and pneumonia. Even some words already learned at that time, as well as his ability to creep and walk with slight support, were lost. Since the latter part of July, during which time this boy has been under my observation, he has had a decreasing number of petit mal attacks until now, when slight ones appear only at weekly intervals. The treatment has been hygienic, dietetic and moral. He is gaining in weight. Mental development is progressing normally although still somewhat retarded for a boy of 2 years, it being about equal to that of a child of 1 year.

COMMENT

While one may not say positively that the influenza and pneumonia caused the epileptic attacks in this child, the latter condition was certainly precipitated by this infectious disorder, and the sequential convulsions bear the earmarks of epilepsy in that there has been tongue-biting and voiding during attacks. The prognosis would seem to be favorable, although an entire arrest cannot be predicted from this short period of treatment.

20 West Forty-Eighth Street.

SIMPLIFIED APPARATUS FOR OBTAINING ARTERIOGRAMS*

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In the use of the polygraph we have found that unless plenty of hands are available, the application and operation of the sphygmograph is a trial to the patience of both patient and technician. Some time ago R. H. Halsey[1] described the use of an Erlanger capsule for obtaining a brachial arteriogram, which we tried with indifferent results. We were unable to obtain a bulb of just the right elasticity to transmit

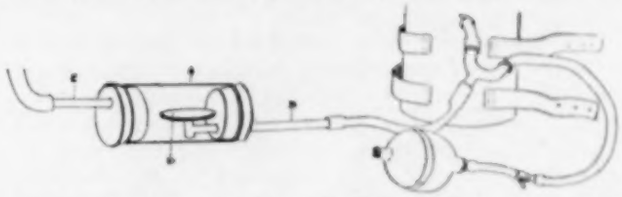

Fig. 1.—Capsule used for obtaining brachial arteriograms: *A*, cylinder, 5 cm. wide and 9 cm. long whose ends are plugged by rubber corks, each perforated by a single opening; *B*, Marey tambour glued in hole of one cork; *C*, short glass tube connecting capsule with recording tambour of polygraph; *D*, one thickness of ordinary dental dam on Marey tambour.

properly the pressure changes. We believe we have found a substitute for the Erlanger capsule that will serve all purposes admirably, and that can be inexpensively put together in any laboratory.

A graduate, about 5 cm. in diameter, may be used and cut so as to secure a cylinder, 9 cm. long. The two ends (Fig. 1 *A*) are plugged with rubber corks, each perforated

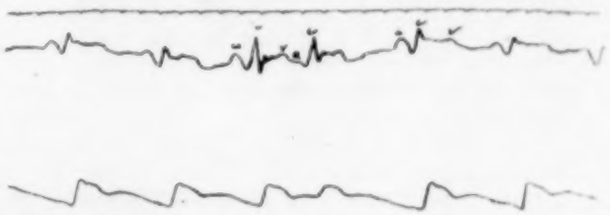

Fig. 2.—Polygraphic tracing: arteriogram produced by use of the apparatus described, showing extrasystole.

by a single opening. Glued in the hole in one cork is the stem of an ordinary Marey tambour (Fig. 1 *B*); in the other cork is a short glass tube (Fig. 1 *C*) to connect the capsule with the recording tambour of the polygraph. On Marey's tambour is used one thickness of ordinary dental dam (Fig. 1 *D*). This holds the pressure in the cuff and responds readily to brachial pulse changes.

With this arrangement and a pressure equal to the diastolic pulse in the cuff, the delicate recording tambour of the poly-

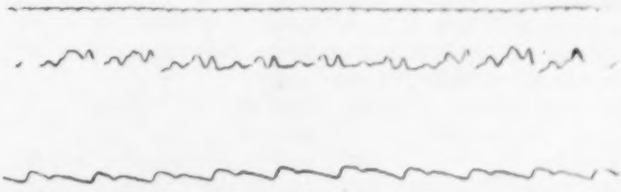

Fig. 3.—Tracing obtained with cuff over sleeve on woman.

graph responds with a gratifying amplitude; and we have no fears of any interruption in our tracing when dealing with a nervous patient who may find it hard to keep quiet.

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* From the Department of Physiology, College of Medical Evangelists.

1. Halsey, R. H.: An Adaptation of the Erlanger Capsule to Any Polygraph for Obtaining Arterial Pulse Records, Arch. Int. Med. **17**: 540 (April) 1916.

Teeth and Their Care.—Brushing the teeth should become a regular part of the child's daily life, just as putting on his shoes in the morning and taking them off at night.—*Minnesota Health J.*, Nov. 13, 1919.

Therapeutics

A Department Devoted to the Improvement of Therapy. A Forum for the Discussion of the Use of Drugs and Other Remedies in the Treatment of Disease.

USE AND ABUSE OF CATHARTICS*

(Continued from page 1699)

BRAN

That constipation is a disease of civilized man and due to the use of concentrated food is a bromidic commonplace, the truth of which might, however, be challenged. If the food of savage man represents a more advanced stage of evolution than the bulky food of cattle, then our still more concentrated diet must be considered a further step in advance. It is true that the progress of civilization has been accompanied by such refinement of food and elimination of indigestible residue, chiefly cellulose, as to lead to the production of a smaller quantity of fecal matter and to less frequent bowel evacuation. This tendency is not in itself evil. Most of us enjoy this concentrated and partly predigested food, and many of us thrive on it. It must, however, be admitted that the intestine of some may not have become adjusted to this ballast-poor diet, that the condition within the bowel of such persons may become pathologic, and that it is necessary for them to return more nearly to the diet of their ancestors by increasing the indigestible residue in their food.

The "back to nature" cry of the health faddist need not lead us to the habitual admixture of sawdust, bran or similar substances to our food. When, however, there is constipation, the question whether increase in cellulose is indicated is important. Unless the patient is of the type characterized by excessive digestion of cellulose and flatulence therefrom; and unless the patient suffers from gastric motor insufficiency or intestinal stenosis, we should favor cellulose in the diet. There are three forms in which cellulose may be added to the diet: as fruits, vegetables and bran. Of these, bran is the richest in cellulose and is one of the most effective prophylactics of constipation.

It is strange that physicians do not make more frequent use of bran, when its laxative properties have so long been recognized in the very general use of bran mash to correct a tendency to constipation in farm animals. The evident reason for this is that bran is not a drug, and hence there is very little information regarding it to be found in the books ordinarily in the the hands of medical practitioners.

Owing to its toughness, bran, the outer covering of wheat, is exceedingly difficult to reduce to a fine powder. The trouble and expense of grinding it is so great that one of the first steps in the milling of flour is the removal of it. However, on rejecting the bran, the miller discards some of the useful constituents of wheat, as will be seen from its composition:

Water,	12.5	Starch and sugar,	43.6
Nitrogenous matter,	16.4	Cellulose,	18.0
Fat,	3.5	Mineral matter,	6.0

The most significant constituent of bran is its cellulose, of which it contains almost 20 per cent. This cellulose is in a dense woody form, almost indigestible in the human digestive tract. As the nutritive constituents of bran are enclosed within walls of this indigestible cellulose, much of them passes through unchanged. Bran is therefore chiefly to be looked on as a form of almost indigestible carbohydrate, which is endowed with considerable laxative value, not only because it adds by its bulk to the distention of the intestine, but also because of the spicate shape of its particles. Excessive irritation does not result from these; for, when properly moistened and heated, bran becomes as soft and pliable as wet paper, and hence produces merely a gentle titillation and is usable even in patients with a tendency to colic. Some of the cellulose undergoes fermentation, giving rise to gas and acid, both of which are laxative. It is furthermore possible that there is a chemical laxative factor present in bran itself, for W. H. Jordon, E. B. Hart and A. J. Patten of the New York State Experimental Station found that the laxative action of bran for cattle was lost when the soluble phosphorus compound named phytin had been extracted. These experiments will have to be confirmed for man.

The dose of bran is a considerable amount: tablespoonfuls rather than teaspoonfuls; two of them rather than one; and taken several times, at least twice daily, best with meals, and indefinitely. We do not have here a cure for constipation in the sense that its use can, after a while, be discontinued. It is generally necessary to employ bran as a regular ingredient of the diet: hence the importance of making the patient enjoy its use, and the desirability of making it an integral part of the meals by means of cookery. Of course, the patient may take it, as is often recommended, stirred into a glassful of water after meals. Sooner or later, however, he will get tired of this uninviting potation, and "forget" to use it. Let the bran enter the kitchen and have the cook see to it that the patient takes enough by making it up into dishes so palatable and diversified that one will never tire of taking it. It is only when used in this way that bran really "cures," or takes care of constipation.

The subjoined cooking recipes[1] might furnish some suggestions for the palatable administration of bran. There are, of course, many other ways, among which may be mentioned: graham or whole meal bread and crackers; bran with cream and sugar; bran mixed, up to one third, with breakfast cereal; bran added to vegetable purées and to fruit sauces; bran incorporated in fish cakes, minced meat, etc. Perhaps the best way to serve it is in bakery products, in which bran may replace white flour up to the extent of 50 per cent. Even pie crust may thus be made with bran.

BRAN RECIPES

BRAN POTATO SOUP

Mash potatoes, add water, milk or cream to make a thin cream, and then strain. To every cup of this thin cream add:

¼ cup bran
½ tablespoonful butter
Salt, celery salt and paprika

Bring mixture to the boiling point, and serve.

BRAN MUSH

2 cups bran
2 cups boiling water
1 teaspoonful salt
1 cup chopped figs or dates

Add bran to boiling salted water and boil from three to five minutes. Cook one hour in a double boiler, adding the figs or dates ten minutes before the mush is done.

* This is the eighth of a series of articles on the pharmacology, physiology and practical application of the common laxatives and cathartics. The first article appeared October 18.

1. Adapted chiefly from Frances E. Stewart's "Cookery for Invalids" (Rand McNally & Co., to be published) and Alida Frances Pattee's "Practical Dietetics" (Mount Vernon, N. Y., published by the author, 1910).

BRAN MASHED POTATOES

2 cups hot mashed potatoes, freshly prepared	1 to 3 tablespoonfuls butter
¼ teaspoonful pepper	⅓ to ¾ cup hot milk or cream
½ teaspoonful salt	⅓ cup bran

Add the four seasonings to the potatoes and whip mixture until it is light. Stir in the bran and serve.

BRAN GRIDDLE CAKES

1 cup bran	½ teaspoonful salt
1 cup flour	1 teaspoonful baking powder
1 tablespoonful sugar	1 cup milk
½ tablespoonful butter or substitute	1 egg

Mix dry materials, add egg slightly beaten and milk and butter, or substitute. Beat thoroughly and bake on a hot griddle. Serve with butter and syrup. This will make twenty cakes.

SWEET MILK BRAN BREAD OR MUFFINS

3 cups bran	¼ cup sugar
3 cups white flour	2 cups milk or water
2½ tablespoonfuls baking powder	2 eggs, beaten very light
2 teaspoonfuls salt	¼ cup fat, melted and cooled

Mix the dry ingredients together thoroughly. Mix the liquid ingredients (including the fat, melted and cooled somewhat). Add the dry to the liquid ingredients, and mix only enough to blend them well. Bake in either of these forms:

As bread: Fill a greased bread tin two-thirds full of mixture and bake it forty-five minutes in a slow oven.

As muffins: Fill greased muffin tins two-thirds full of mixture and bake from twenty to thirty-five minutes in a moderate oven, 342 F. or 190 C.

SOUR MILK BRAN BREAD OR MUFFINS

2 cups bran	2 cups thick sour milk or buttermilk
4 cups graham flour	2 teaspoonfuls fat, melted and cooled
1 teaspoonful soda	
2 teaspoonfuls salt	
1 cup molasses (not black)	

Directions same as in preceding recipe excepting that the baking time for bread should be one and one-fourth hours.

This bread is almost as sweet as gingerbread. Children usually like it. When desired less sweet, reduce the molasses and increase the sour milk accordingly.

YEAST BRAN BREAD OR MUFFINS

1½ cups milk	½ cup lukewarm water
3 teaspoonfuls molasses (avoid black)	2¼ cups white flour
3 tablespoonfuls fat	1¾ cups graham flour
2½ cakes compressed yeast (size 1⅛ by 1⅛ by ⅜ inch).	1 tablespoonful salt
	2 cups bran

Scald the milk, then cool it to blood temperature. Blend the molasses, fat and yeast with the lukewarm water to make a smooth paste. Add the molasses mixture to the lukewarm milk. Add flour to make a sponge, or thick batter. Beat the sponge from three to five minutes, cover, and put in a warm place until it is double in bulk.

Add salt and bran, and beat dough hard from three to five minutes in a bowl, using a wooden spoon. The dough should be of the consistency of soft baking-powder biscuit dough.

Half fill with dough a well-greased bread tin or muffin tin; then lightly rub the top of dough with fat.

Let dough stand in a warm place until it is double in size; then bake. Do not jar the dough while putting it into the oven, else it is likely to fall. Bake one hour.

Raisins, from one-half to 1 cup (soaked from one to two minutes in boiling water and then dried) or one-half cup of English walnut meats cut in slices, or both, may be added if desired.

BRAN BISCUIT

½ cup wheat bran	1 teaspoonful melted butter
½ cup improved graham flour	1 saltspoonful salt
1 teaspoonful baking powder	Milk

Sift dry ingredients, rub in the butter, and add milk to make a soft dough. Roll it out and bake in hot oven.

BRAN COOKIES

1 cup bran	1 cup sugar
1 cup white flour	¼ cup molasses
½ cup graham flour	½ cup milk
2 tablespoonfuls butter or lard	½ teaspoonful salt
2 teaspoonfuls baking powder	1 egg

Beat together butter and sugar, egg and milk. Add dry ingredients. Drop the mixed batter with spoon on well-greased pan. Bake about twenty-five minutes in hot oven. This makes three dozen cookies.

Raisins may be added as follows: Wash the raisins, let them soak in warm water to cover, and then boil them in this water until they are plump. Drain, dry and chop them.

Cinnamon, nutmeg and chopped nuts may be added to the list of ingredients, if desired.

To vary the recipe, the cookies may be spread with cooked and chopped figs or dates, and dusted with powdered sugar.

BRAN MACAROONS

1 egg	1 cup almonds (finely chopped)
1 cup granulated sugar	2½ tablespoonfuls bran
2½ tablespoonfuls flour	

Beat egg and sugar until very light. Add nuts and then flour. Drop on buttered tins, and bake in a medium hot oven ten minutes.

MAKING CASTOR OIL TASTEFUL OR TASTELESS

DR. GEORGE F. KEIPER, Lafayette, Ind., writes: "In re the excellent articles appearing in THE JOURNAL on the 'Use and Abuse of Cathartics,' especially the one in last week's issue on 'Castor Oil,' may I make a suggestion as to a way in which it may be made tasteless?

"Take a glass of ice water. Pour on the water the dose of the oil. The oil will congeal into a bolus, as it were, which will pass the lips, teeth and tongue as one mass, untasted.

"This suggestion I obtained years ago from one of our elders in the profession."

COMMENT.—Numerous formulas have been suggested for making castor oil tasteful or tasteless. The "Pharmacology of Useful Drugs," by Hatcher and Wilbert, suggests that because of its disagreeable taste castor oil is given preferably with pungent, freely frothing beverages, or enclosed in soft gelatin capsules, holding about 1 teaspoonful. It may also be administered in the form of a mixture or emulsion and this latter type of administration is becoming popular. The following may be used as a type formula:

		Gm. or C.c.	
℞	Benzosulphinid (saccharin)..	0.05	1 grain
	Oil of cloves.....	0.2	3 drops
	Oil of cinnamon.....	0.3	5 drops
	Alcohol	4.0	1 fl. dram
	Castor oil, a sufficient quantity to make.....	100	3 fl. ounces

In making this mixture, the benzosulphinid, oil of cloves and oil of cinnamon should be dissolved in the alcohol and this in turn added to the castor oil.

BURNS OF THE EYE BY LIME

The increase in the use of chlorinated lime for household purposes has resulted in a somewhat greater prevalence of burns of the eye by this substance. During July and August some twenty cases were brought to the attention of the National Committee for the Prevention of Blindness. The circumstances in each case were that a sudden explosion of gas from the inside of the can followed the opening of the container, the shower of lime dust usually striking the eyes and face of the victim. In most cases, complete recovery followed, as medical care was usually provided immediately after the accident. The care of such cases usually includes anesthetization with a few drops of 1 per cent. solution of holocain or a 4 per cent. solution of cocain, and then the removal of the remaining particles of the lime. The irrigating fluid should be a weak solution of vinegar to neutralize the caustic effect of the lime. Subsequently, cold applications may be applied to the closed lids, and a mild antiseptic, such as a boric acid solution, dropped into the eye every two or three hours. If the burn is at all extensive, the conjunctival sac may be filled with an antiseptic ointment, which not only relieves the pain but also prevents the adhesion of opposing surfaces. The most serious and important sequel is the adherence of the lid to the globe (symblepharon) when there are two opposing raw surfaces. In an endeavor to prevent these accidents, the national committee took up the matter with manufacturers and distributors. The latter report that chlorinated lime decomposes when exposed to high temperature or to dampness. To avoid accidents, it is recommended that a small hole be punched in the container to allow the gas pressure to be released before the top is taken off the can.

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SATURDAY, DECEMBER 6, 1919

DOES SILICON HAVE A PHYSIOLOGIC SIGNIFICANCE?

The occurrence of the element silicon as a constituent of animal tissues has often been reported. For the most part, however, it has been regarded as an adventitious component that has accidentally found its way into the organism and been deposited somewhere because of the insolubility of many of the compounds of silicon. Accumulations have been discovered in the lungs as the result of inhaled dust containing siliceous particles. Among gold miners, silicosis thus arises just as anthracosis results from the inhalation of coal dust, siderosis from iron-containing dusts, and aluminosis from clay dusts.

The late Professor Kobert of Rostock and his pupils have been inclined in recent years to ascribe great significance to silicon, which they regard as a normal rather than an accidental constituent of certain tissues. Ever since the discovery of the unique physiologic rôle of minute quantities of iodin in the body there has been a temptation to search for traces of many other elements not hitherto regarded as essential to the normal functions, and to discover a possible unexpected significance in their biologic occurrence. Manganese, arsenic and zinc have thus received consideration because they are unquestionably present at times in the living tissues. Silicon has likewise had its claims for recognition from this standpoint advanced. Thus Kunkel[1] of Würzburg, having discovered it in numerous analyses of the pancreas, actually arrived at the conclusion that silicon is stored in this organ much as iodin is deposited in the thyroid and iron in the liver. As the result of his numerous extensive investigations, Schulz[2] maintained that silicon is an accompaniment of all connective tissue, the content of the latter therein being greater in the less developed stages.

An occasional connection between silicosis and tuberculosis of the lung has been recorded in the past. In such cases, however, the tuberculosis has been regarded as a secondary factor to which all dust diseases of the lung predispose. There is no doubt that silicosis may occur without any symptom of tubercles. Kobert and his pupils[3] have approached the relation of silicon to the lungs from a different point of view. Having observed that the connective tissue of the lungs contains silicon and that in the fibrous type of phthisis this tissue is further enriched in respect to the element, they assume that the latter plays a part in the successful development of that tissue which is responsible for the healing or circumscription of the tuberculous lesions. Consequently they have suggested the use of soluble silicates in the therapy of pulmonary tuberculosis.

Gonnermann[4] has revived the view that silicates may contribute to the induration of tissues which might, without silica, fail to heal satisfactorily in the neighborhood of lesions such as those described. He points out that many of the popular folk remedies for tuberculosis of the lung are comparatively rich in silica, thus suggesting an unsuspected possibility to explain their use. It would be unjustified to create any enthusiasm for a therapeutic suggestion that has comparatively so little to commend it. Even if the silicates are devoid of any real significance whatever in relation to the objects discussed, it is worthy of note not only that they are nontoxic in ordinary doses but also that silica is more widely distributed than is suspected in products that may serve as foods. Under these circumstances it need not be surprising if silica is distributed by chance rather than physiologic purposefulness in the body, just as its deposition in true silicosis is the result of accidental circumstances.

1. Kunkel, A. J.: Sitzungsb. d. phys.-med. Gesellsch. zu Würzburg, Jahrg. 1898, p. 78.
2. Schulz, H.: Arch. f. d. ges. Physiol. **84**: 67, 1901; **89**: 112, 1902.
3. Siegfried, A.: Ein Beitrag zur Kenntnis des physiologischen und pharmakologischen Verhaltens des kieselsauren Natriums, etc., Arch. internat. de pharmacol. et de thér. **9**: 285, 1901.
4. Gonnermann, M.: Beiträge zur Kenntnis der Biochemie der Kieselsäure, Ztschr. f. physiol. Chem. **99**: 255, 1917.

THE CONSERVATION OF ANTISCORBUTIC FOODS

Reports which are accumulating from various regions of war-stricken central and eastern Europe indicate that dietary deficiency diseases, notably scurvy, are rife among the unfortunate populations, which are unable as yet to secure their usual quota of food in its normal variety. The possibility of relief is hampered by the difficulty in providing and transporting those foods which are recognized as having conspicuous protective value. Fresh vegetables and fruits, on which reliance is commonly placed to combat or avert scurvy, are scarce or unavailable. Fresh milk, which is usually depended on to safeguard the nutritive welfare of infants, is obtainable not at all or only with great difficulty in some of the afflicted regions. The dairy situation and the outlook for immediate relief are anything but promising.

In this predicament the agencies for relief have first of all considered the possibility of supplying vegetables,

fruits and milk—the foods seemingly most essential in the crisis—preserved in some way which would permit of sanitary and economic transport, as well as represent modest costs within the range of trade limitations. As has been indicated on previous occasions in THE JOURNAL, an unexpected obstacle was encountered in the more recent discoveries that various foods of this character lose their antiscorbutic potency in great measure or entirely as the result of the modes of preservation. This has been demonstrated for the current methods of desiccation with the aid of heat. The factors primarily responsible for the destruction of the antiscorbutic property are by no means understood as yet. Mere cooking in the usual culinary fashion does not necessarily destroy all the antiscorbutic potency of vegetables. Hess and Unger[1] have reached the conclusion that the method of preparing dehydrated vegetables may yet be perfected so that a product can be furnished that will be comparable in nutritional value to the fresh vegetable. They add that the problem seems to be one that is open to solution. The question of the degree of heating, which is generally regarded as of prime importance, appears to be merely one of several factors. Ideal conditions for furnishing dehydrated vegetables include the use of young vegetables, dehydrated shortly after they are plucked, and kept well sealed until they are to be eaten, and probably numerous other details which must be carefully observed if deterioration is to be prevented. Meanwhile no dependence can be placed on dehydrated vegetables as antiscorbutics.

The Committee on Accessory Food Factors, appointed jointly by the Medical Research Committee of England and the Lister Institute, has recently issued a statement that "canned vegetables are useless for prevention of scurvy." This dictum is probably the outcome of recent investigations conducted by Chick and her collaborators at the Lister Institute in London.[2] Experiments with cabbage and beans indicated that in the process of canning the greater part of the original antiscurvy value of the raw vegetable is destroyed. In the case of runner bean pods, the loss is estimated at about 90 per cent. of the original value; in the case of cabbage, at about 70 per cent. of the original value. The process of canning cabbage included heating in water for about one hour at from 90 to 100 C., and for beans the process was repeated on the day following. This loss is primarily due to the destruction of antiscurvy material occurring during the heating involved in the process of canning. A further loss may be expected to take place during the period of storage.

Before condemning canned foods in general as the result of such somewhat limited experience, we must recall the observations of American investigators on the antiscorbutic value of canned tomatoes. Hess and Unger[3] have tested them with successful results both in the experimental scurvy of the guinea-pig and in infantile scorbutus. Tomatoes have also been desiccated without loss of all their antiscorbutic power.[4] Here, again, sweeping generalizations should be avoided.

We feel constrained to utter a similar warning in the case of dried milks. It is generally conceded that if milk is heated sufficiently, for example to 120 C. for an hour, its antiscorbutic power, at best not pronounced in the fresh fluid, is entirely lost. According to Barnes and Hume,[5] dried milk also is decidedly inferior. The specimen tested by these English investigators was desiccated by the Just Hatmaker process. Hess and Unger[1] have emphasized, however, that milk does not necessarily lose its antiscorbutic value in the course of drying. If it is dried rapidly, even at a temperature of about 240 F., it retains sufficient of the protective factor to have curative value, provided, naturally, that it was fresh at the time of drying. In considering the question of destruction of this vitamin by heat or by alkali, the duration of exposure to the detrimental influence is of the greatest importance. Let us hope that the manufacturers of dried milks, which seem destined to play an important part in the nutrition of the young in case fresh milk is not available, will devote their energies to the perfection of methods that shall in greater measure conserve the antiscorbutic potency of the mammary secretion. Barnes and Hume maintain as the result of their studies at the Lister Institute that "scalded" milk, that is, milk brought rapidly to a boil and then immediately cooled, is distinctly superior, as an antiscorbutic, to dried milk. They also venture to suggest, on the basis of what we regard as rather slender evidence, that winter milk is inferior to summer milk in antiscorbutic properties, corresponding to the differences in the cow's diet at these different seasons.

The recent investigations here and abroad have increased the list of products demonstrated to exert antiscorbutic potency, and have likewise helped to eradicate some erroneous beliefs. Orange juice no longer is the sole help in times of scorbutic distress. The latest addenda are the dry tamarind, cocum and mango, which possess, according to Chick, Hume and Skelton[6] of London, a definite, if small, antiscorbutic value. The experimental demonstration of this fact accords with the esteem in which these fruits are held as antiscorbutics among some of the natives of India. Their value is now reported to be greatly inferior to

1. Hess, A. F., and Unger, L. J.: Scurvy, VIII, Factors Affecting the Antiscorbutic Value of Foods, Am. J. Dis. Child. **17**: 221 (April) 1919.

2. Campbell, Mabel E. D., and Chick, Harriette: The Antiscorbutic and Growth-Promoting Value of Canned Vegetables, Lancet **2**: 320 (Aug. 23) 1919.

3. Hess, A. F., and Unger, L. J. (Footnote 1); Proc. Soc. Exper. Biol. & Med. **15**: 96, 1918.

4. Givens, M. H., and McClugage, H. B.: The Antiscorbutic Property of Vegetables, I, An Experimental Study of Raw and Dried Tomatoes, J. Biol. Chem. **37**: 253 (Feb.) 1919.

5. Barnes, Rosamund E., and Hume, E. Margaret: A Comparison Between the Antiscorbutic Properties of Fresh, Heated, and Dried Cow's Milk, Lancet **2**: 323 (Aug. 23) 1919.

6. Chick, Harriette; Hume, E. Margaret, and Skelton, Ruth F.: The Antiscorbutic Value of Some Indian Dried Fruits, Lancet **2**: 322 (Aug. 23) 1919.

that of raw cabbages, swedes, germinated pulses, and orange or lemon juice, but equal or superior to that of carrots, beetroots, cooked potatoes or raw meat juice, compared weight for weight in the natural condition.

THE NEW BACCHUS

No longer should artists—at least American artists—represent Bacchus astride a wine barrel; the little god should be depicted astraddle a "patent medicine" bottle. While no statistics are at hand—largely because those who could collect such statistics are not going to publish them—on the increase in the consumption of the numerous highly alcoholized "patent medicines" since the advent of national prohibition, there is no question that the sales of these products have been mightily augmented. As every physician and pharmacist knows, there are on the American market a number of widely advertised and extensively sold "patent medicines" whose most potent ingredient is alcohol. All such preparations, of course, contain, in addition to the alcohol, certain drugs on which the manufacturers base their therapeutic claims. These drugs, in nearly every instance, are either harmless or, if potent, are present in such small quantities as to have a negligible physiologic effect.

The problem of controlling the sale of these alcoholic medicines can be satisfactorily solved in only one way and that way is to prohibit the use of alcohol in preparations of the "home remedy" type, that is, in those products which are sold indiscriminately to the public for the self-treatment of disease. Such action has already been taken with reference to a drug like cocain, for instance, and in a modified form with reference to opium and its derivatives. Alcohol is a powerful drug. It is likely to be misused; so likely, in fact, that the United States has decided it is too dangerous to be used for beverage purposes. If alcohol is to be used for medicinal purposes it should be under medical supervision and the medical profession should be held as strictly accountable for any misuse of the drug as it is now held responsible for the misuse of the drugs covered by the Harrison Narcotic Law.

The manufacturers of "patent medicines" of the alcohol type all deny that the alcohol is present for its drug action; it is used as a "solvent" or as a "preservative" or "to prevent freezing" or for some other reason. They argue that certain drugs can be extracted only by means of alcohol. This is true. It is equally true that after these substances have been so extracted, the alcohol can be evaporated and the drug principles that are left can be put up in the form of tablets or capsules. In many instances glycerin can be used as a solvent where a liquid medicine is desired.

One of the chief arguments put forth by the manufacturers of alcoholic "patent medicines" is of the *ad hominem* type. They declare that physicians prescribe tinctures, fluidextracts, etc., which contain alcohol in varying amounts. Very true. Physicians also prescribe such dangerous drugs as cocain, morphin, strychnin and arsenic, when in their judgment such drugs are indicated. This is no reason, however, why dangerous drugs should be sold indiscriminately to every Tom, Dick or Harry who has a pain or who, by reading nostrum advertisements, has been made to think he has a pain.

The nub of the whole thing is that none of these alcoholized "patent medicines" would have any vogue were the alcohol removed; neither would such removal affect the therapeutic value—real or supposititious—claimed for such products.

THE MEDICAL CURRICULUM, THE LABORATORY AND MEDICAL PRACTICE

Tradition is potent in medical practice, as in other fields of human activity. We cling to the old so long as it is not positively harmful. Bloodletting as a routine procedure was as reluctantly abandoned as was the use of the magical rod. Likewise many remnants of the materia medica of bygone days are retained as a supposedly precious heritage, although the justification for their application in therapy would put a severe strain on the scientific logic of devotees. Rational therapy must be justified by demonstrable clinical results. This does not mean that drugs and pharmaceutical products are necessarily of limited value because the secret of their beneficial effects has not been unraveled by the scientific investigator. Science may be late in furnishing an explanation of unquestionable potency in long used agents.

Our criticism is leveled at those types of pseudotherapy which retain procedures and products that may placate the patient while they leave the physician, like the medieval medicine man, a mere prescriber of a traditional something. Cushny,[1] in a lecture to the students of medicine at the University of Edinburgh, has well remarked that although we must not dispraise the ancient physicians, the fathers of medicine to whom we owe so much, too much veneration for our ancestors hardly makes for progress, and may be a burden to our young men. The division of medical teaching into a dozen or more departments, Cushny adds, had not for its object that the student should be taught twelve times as much, but that he should be taught more accurately. We must scrap our obsolete weapons, and send out young physicians adequately armed with the best, and not burdened with the superfluous. The teaching in materia medica should be limited to drugs of real importance in therapeutics or in the principles they illustrate.

Another criticism that is directed against the present day trend in scientific medicine intimates that it tends

1. Cushny, A. R.: Progress in Materia Medica, Edinburgh M. J. 21: 317 (Dec.) 1918.

to develop an aloofness from the human being because of its devotion to the laboratory. It is assumed that the latter is essentially a factor either for devising methods of diagnosis or for exposing the worthlessness of many supposed remedies. Undoubtedly laboratory investigation has done much to relegate certain drugs and devices to the rubbish heap; but it has also furnished an intelligible explanation for the worth of many others. In this connection we cannot forbear quoting Cushny's reminder of the debt to the laboratory. It is a fact, he says, that is not always remembered, that in the last half century no drug of the first importance has entered by any other portal than that of the experimental laboratory. Without it, Cushny adds, we should have to depend on opium and morphin for soporifics; chloral and its allies would be unknown. Cocain and the local anesthetics and analgesics would not be available, nor the antitoxins and arsphenamin. If it were possible to estimate the value of the life saved and the suffering relieved by even two or three of the remedies introduced by the laboratory route, and put it against the expense of all the laboratory investigations throughout the world, the dividend would be found so enormous that the cry would be, not for economy, but for lavish expenditure in such a paying investment.

Current Comment

STANDARDIZATION OF LABORATORY TESTS

So long as laboratory tests employed by practitioners of medicine are simple, there is little opportunity for confusion in their interpretation. However, errors of interpretation are likely to occur in the use of complex reactions or when uniform standards are not adopted. Several years ago the writer of a paper on scabies asserted that all persons with scabies had albuminuria; subsequent investigation showed that the test for albumin which was used was so delicate that it showed the presence of albumin even in normal urines. Many of the modern laboratory tests, such as the Widal and Wassermann reactions, are extremely complicated. The technic of these tests has been gradually modified by different observers so that now many systems of performing the tests are in use. In a recent article by Kolmer and Flick,[1] eight different methods of performing the Wassermann test are compared, and it is demonstrated that each gives different results. The same thing is true of the Widal reaction, as has been pointed out by Dreyer. Obviously, it is desirable that every one who discusses the results of the Widal reaction or of the Wassermann reaction should refer to the same thing. When this is not the case, the figures regarding the validity of a given test presented by different observers are not comparable, and confusion rather than enlightenment results. The time has come when these tests should be standardized throughout the world. Such standardization need not exclude further experimentation on any of the tests in question, and provision should be made for the reconsideration of the standards at stated intervals. As a step in this direction the U. S. Pharmacopeia already has a section on Diagnostic Reagents and Clinical Tests which, thus far however, is chiefly concerned with the strength and purity of reagents. The United States government maintains a Bureau of Standards, and it is possible that through this organization or some similar one the important work of standardizing laboratory tests can be accomplished. In any event, the work needs to be done.

1. Kolmer and Flick: Am. J. Syphilis **3**: 541, 1919.

THE ACTION OF THE PYLORIC SPHINCTER

The current teaching regarding the control of the pyloric sphincter and the emptying of the stomach is largely due to the writings of Cannon and his associates at the Harvard Medical School. They have suggested that it is under chemical rather than purely mechanical control. Acid on the stomach side is regarded as a cause of the relaxation of the pyloric sphincter; whereas on the duodenal side the same reaction tends to produce a closure of the sphincter and an inhibition of gastric evacuation. Among the evidences of the first proposition is the fact that carbohydrate meals with a low acid-absorbing power leave the stomach rapidly; but if an alkali, like sodium bicarbonate, is added, the exit from the stomach is delayed. Proteins which combine with acids leave the stomach slowly as a rule, whereas acid proteins are discharged into the duodenum more promptly. This hypothesis fails to explain certain admitted facts, such as the emptying of the stomach in achylia gastrica and the rapid exit of water from the stomach. In extensive roentgen-ray studies on the movements of this organ in man, Cole[1] has pointed out that in health, as well as in disease, the first portions of the food ingested by the fasting stomach may leave it promptly. As acidity can scarcely be assumed to develop so early as a relaxing stimulus, Cole correlated the opening of the pylorus with the passage of peristaltic waves and an increased tonicity of the stomach. Investigations of the gastric functions, both in man and in animals, at the physiologic laboratories of the University of Chicago have brought Luckhardt, Phillips and Carlson[2] similarly to the conclusion that certain motor activities of the stomach are intimately associated with the relaxation of the pyloric sphincter, thus correlating this with mechanical as well as more purely chemical developments in the organ. Marked motor activities, either as tonus changes or peristalsis, as well as the presence of free acid may lead to inhibition in the tone of the sphincter at the pylorus and to its consequent opening. This explains why water alone may issue neutral from the stomach, as Ivy[3] has reported. According to the Chicago physiologists there is a more intimate relation between the muscular activity and the opening of the pylorus than between the latter and the reaction of the intra-

1. Cole, L. G.: Am. J. Physiol. **42**: 618, 1917; Physiology of the Pylorus, Pilleus Ventriculi and Duodenum as Observed Roentgenographically, J. A. M. A. **61**: 762 (Sept. 6) 1913.
2. Luckhardt, A. B.; Phillips, H. T., and Carlson, A. J.: Contributions to the Physiology of the Stomach, LI, The Control of the Pylorus, Am. J. Physiol. **50**: 57 (Oct.) 1919.
3. Ivy: Am. J. Physiol. **46**: 420, 1918.

gastric contents. Thus they record that very quickly after ingestion of food, fluoroscopic examination of the stomach of man, while indicating the motor activity of the stomach, shows that the pylorus opens for the ejection of chyme with arrival at the sphincter of powerful advancing rings of constriction, perhaps aided, as has been suggested, by a general increase in the tone of the stomach musculature as a whole.

TEST FIGHT ON SOCIAL INSURANCE IN NEW YORK

The governor of New York has announced that, as a part of his administration program, an effort will be made at the coming session of the state legislature to pass a bill providing for compulsory state health insurance. In this policy, he has the support of the New York State Federation of Labor. The Medical Society of the State of New York, as previously reported,[1] at a special meeting of its house of delegates, unanimously adopted the report of its special committee on this subject, unqualifiedly opposing the passage of any law instituting a system of compulsory health insurance. This brings the question to a clear cut and definite issue in New York. As New York is one of the oldest and most highly developed states industrially, commercially and socially, it is an ideal state in which to discuss and test out this important subject. The limitation of the discussion to the legislature of one typical state will enable the opponents and advocates of health insurance to concentrate their energies to the best advantage.

ALLEGED PLACENTAL FUNCTIONS

The peculiar anatomic relations of the placenta have long lent an unusual interest to the study of its functions. There is no direct communication between the maternal and fetal circulations. The placenta represents the fetal organ for respiration, nutrition and excretion; but physiologists have not been content to limit the functions of the placenta to these more obvious necessities. Recognizing that simultaneously with the development of this structure there occur changes in the maternal organs that are not observed at other periods in the life of the female, efforts have been made to correlate or connect the concurrent phenomena. The placenta has been considered as having an internal secretion—as elaborating hormones that affect the maternal organism. For example, it has been suggested that the placenta is the specific source of a substance that causes the hyperplasia of the mammary gland during pregnancy. The evidence for this assumption has been furnished primarily by experiments in which placental tissue was fed to virgin animals. A critical estimate of the results makes the hypothesis unlikely. Recently Hammett[2] has attempted without success at the Boston Lying-In Hospital to detect by bedside observation an increased growth of mammary tissue when desiccated placenta was fed postpartum to lactating women, as compared with a series of patients not receiving the placental material. From the evidence at hand he concludes that it is reasonably certain that the placenta has little if any direct influence on the mammary development during pregnancy, the source of the stimulus being presumably elsewhere in the genital or fetal structures. Nor, according to the preponderance of evidence, is any influence exerted by the placenta on the flow of milk. Hammett and McNeile[3] fed 10 grains of desiccated placenta three times a day to more than 300 women without detecting any galactagogic activity in comparison with the secretion of mothers who did not receive the material. Hammett[2] has lately reached the conclusion, however, that there is produced in the placenta some substance capable of acting as a stimulus to growth, when ingested by the mother and passed on to the infant in the mammary secretion. Observations by Cornell[4] have been given a similar interpretation. Hammett makes the further deduction that it is not illogical to suppose that the placenta in utero also produces a substance that acts as a stimulus to fetal growth. However, the familiar shortcomings of arguments based on such indirect evidence must make us hesitate to give the placenta a place in endocrinology.

PIGMENTATION OF THE ORAL MUCOUS MEMBRANE

Although blackish pigmentation of the skin has been noted—aside from the coloration of the epidermal covering of the dark races—in freckles and in Addison's disease, it is not common as a purely pathologic manifestation. So far as the color in the various instances just referred to is due to that as yet poorly defined substance termed melanin, there is an impression among investigators that cells which do not normally form this pigment probably do not acquire the capacity to do so under pathologic conditions. Thus, the coloring matter of the so-called "melanosis" of the large intestine is said to be neither true melanin nor ordinary "waste" pigment.[5] The pigment deposited in the skin in Addison's disease is generally assumed to represent merely an exaggerated quantity of that normally produced there.[6] Parkes Weber[7] of London has recently referred anew to rare cases of black pigmentation of the mucous membranes of the cheeks, lips and mouth proper that are occasionally encountered and cannot be ascribed to disease of the suprarenal structures. It is associated with pigmentation of the skin of the face, especially about the mouth, and possibly of other parts of the body. Since the phenomenon has been observed by Rolleston[8] in persons

1. New York State Society Condemns Health Insurance, New York Medical News, J. A. M. A. **73**: 1706 (Nov. 29) 1919.
2. Hammett, F. S.: The Functions of the Internal Secretion of the Placenta, Endocrinology **3**: 307 (July-Sept.) 1919.
3. Hammett, F. S., and McNeile, L. G.: The Effect of the Ingestion of Desiccated Placenta on the Variations in the Chemical Composition of Human Milk During the First Eleven Days after Parturition, J. Biol. Chem. **30**: 145 (May) 1917.
4. Cornell, E. L.: Placental Tissue as a Galactagogue, Surg., Gynec. & Obst. **27**: 535 (Nov.) 1918.
5. Henschen and Bergstrand: Beitr. z. path. Anat. u. z. allg. Path. **56**: 103, 1913; cited by Wells, H. G.: Chemical Pathology, Ed. 3, p. 467.
6. Pförringer: Centralbl. f. Pathol. **11**: 1, 1900.
7. Weber, F. Parkes: Patches of Deep Pigmentation of the Oral Mucous Membrane not Connected with Addison's Disease, Quart. J. Med. **12**: 404 (July) 1919.
8. Rolleston, H. D.: Pigmentation of the Circumoral Skin and of the Buccal Mucosa in Pernicious Anemia, Proc. Roy. Soc. Med., Clinical Section **3**: 9, 216, 1909-1910.

suffering from demonstrated pernicious anemia, it may be debated whether there is some intimate connection between the pathology of this disease and the pigmentation of the oral mucous membrane. It occurs in persons of dark complexion and notably in certain races. Hence Weber[7] is inclined to regard it as physiologic in character and perhaps atavistic in origin. Black patches are very common in the oral mucous membranes of dogs and other animals. Perhaps, now that attention is being directed more specifically to it, this form of pigmentation will be found more common in man, in whom it may represent a racial or ethnic feature rather than a purely pathologic manifestation.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CALIFORNIA

Anesthetists Organise.—An organization to be known as the Southern California Anesthetists was formed at a meeting held in Los Angeles, last month.

Personal.—Drs. Anders Peterson and Charles E. Zerfing, formerly police surgeons of Los Angeles, have applied for passports to go abroad to make a study of leprosy and influenza. They expect to go first to China and to be gone for two years.——Drs. Laura T. Myers, Etta G. Gray and Lulu H. Peters, Los Angeles, are working together in Serbia.

Arrested Fourth Time.—Three times acquitted on a charge of practicing medicine without a license, Armonda Dominguez, the "Miracle Man," of San Bernardino, is reported to be again facing a jury on the same charge. Dominguez claims to have obtained his skill from his father who was a druggist and chemist and from studying botany and chemistry. He denies ever having attempted to commercialize his skill.

Smallpox Prospects.—At the eleventh annual conference of state, county and city health officials held in connection with the league of municipalities at Riverside, recently, a special mention was made of the rapid increase in smallpox throughout the state during the last year. It was stated by Dr. Allen F. Gillihan, Berkeley, state district health officer, that about 75 per cent. of the children in the state have not been vaccinated.

Osteopathic College Seeks Mandamus.—The College of Osteopathic Physicians and Surgeons of Los Angeles, according to report, has recently filed mandamus proceedings to compel the California State Board of Medical Examiners to approve the institution as a medical school. The institution had been so recognized a year or two ago but, it is alleged, recognition was withdrawn owing to the failure of the college to meet the requirements of the board.

Lane Medical Lectures.—The Lane medical lectures to be given by Dr. Alonzo E. Taylor, professor of physiologic chemistry at the University of Pennsylvania, are to be on the general topic of "The Feeding of the Nations at War." The following are to be the dates and titles of the lectures: Dec. 8, 1919, The Problem of Feeding a Nation; December 9, The Feeding of the United Kingdom; December 10, The Feeding of France and Italy; December 11, The Feeding of the Enemy States; and December 12, The Food Problem of Europe After the War.

New Memorial Laboratory to Open.—The directors of the Santa Barbara Hospital have issued invitations to the formal opening of the new Memorial Laboratory and Clinic Building. This building was founded by the late Dr. Nathaniel Bowditch Potter, formerly of New York City, for a study and research of metabolistic diseases and represents, in its building equipment and staff, the first completely organized metabolistic unit in the country. It is receiving support from the Carnegie Foundation for the Advancement of Teaching. On the death of Dr. Potter, July 5, Dr. Nelson W. Janney, New York City, was appointed director.

Changes in Emergency Hospital Department.—The following changes were made in the Emergency Hospital Department of San Francisco by the city board of health: Dr. Edmund W. Butler, emergency surgeon, was raised to the post of chief surgeon, in charge of the Emergency Hospital Service, succeeding Dr. Alanson Weeks, resigned; Dr. Maurice Heppner, formerly resident surgeon of the San Francisco Hospital, was appointed emergency surgeon, relieving Dr. Albert H. Taylor from active duty; Dr. Henry J. Kreutzmann was appointed emergency surgeon and Dr. Gertrude A. Spriggs was also appointed emergency surgeon, relieving Dr. Charles J. Peterson from active duty.

CONNECTICUT

Medical Guilds in Italy.—Dr. Edward C. Streeter, Boston, delivered an address, November 17, before the Yale Medical Society, New Haven, on "Early Medical Guilds in Italy."

Personal.—Dr. William M. Stockwell, New Britain, superintendent of the New Britain Sanitarium, has resigned, to take effect, Jan. 1, 1920. He has accepted a similar appointment at the State Sanatorium, Newington.

Returned Service Men Welcomed.—Middlesex County Medical Society celebrated the return of its military men at a banquet held in Middletown, October 9. Twelve of the seventeen members of the society who were in military service were present and were the guests of honor, and Dr. Frank K. Hallock, Cromwell, acted as toastmaster.

Mental Hygiene Conference.—The annual meeting of the Connecticut Society for Mental Hygiene will be held Monday, December 15, at 3 p. m., in the building of the New Haven County Medical Society. Bishop Edward C. Acheson, Suffragan Bishop of Connecticut, will preside. The society will be adressed by the medical director, Dr. William B. Terhune, New Haven.

Portrait Presented.—At the meeting of the New Haven County Medical Association, November 5, a portrait of the late Dr. Henry Fleischner was presented to the association by his widow. Dr. Frank H. Wheeler, New Haven, made the presentation for Mrs. Fleischner, and the gift was accepted in behalf of the association by the president, Dr. Louis M. Gompertz, New Haven.

ILLINOIS

Building for Physicians.—A building for the exclusive use of physicians is to be erected by Mr. I. Frank Deuel, at Rockford. The building will cost $150,000 and will be equipped with a laboratory, drug and medical supply rooms, clinic suites, and garages.

Smallpox in Monmouth.—Dr. Charles E. Crawford of the state board of health went to Monmouth, November 20, for a conference with the mayor and other officials regarding the measures to be taken to prevent an epidemic of smallpox in the city. There are at present about twenty-five cases reported, all of mild type.

Personal.—Dr. Alice Barlow Brown, Winnetka, who spent a year in Belgium, supervising relief work, left Chicago, November 29, on a relief mission to Serbia. She was accompanied by Miss Lucy M. Morehouse, acting superintendent of the Evanston Hospital.——Harold Swanberg, Captain, M. C., U. S. Army, Quincy, who has been in charge for more than two years of the roentgen-ray laboratories of the U. S. Army general hospitals at Fort McPherson, Ga., and Fort Sheridan, Ill., has been discharged from the service.

Tuberculosis Association Meeting.—At the annual meeting of the Illinois Tuberculosis Association, Dr. George T. Palmer, Springfield, was elected president; Drs. Herbert C. Jones, Decatur, and Moss Maxey, Mount Vernon, vice presidents, and the following physicians members of the executive committee: Drs. J. W. Pettit, Ottawa; E. W. Fiegenbaum, Edwardsville; W. M. Hartman, Macomb; N. C. Iknayan, Charleston, and Samuel L. Gabby, Elgin. The association passed a resolution adopting the standards of sanatorium operation of the National Sanatorium Association and the National Tuberculosis Association, and recommending the rating and scoring of all public sanatoriums in Illinois on these standards by the state department of public health.

Chicago

Nurses to Graduate.—The second graduation exercises of the Chicago Training School for Home and Public Nursing were held at Medinah Temple, December 2, when a class of 1,300 received diplomas.

Illegal Practitioner Fined.—According to report, George W. Hunter of 2601 Calumet Avenue, was arrested by the Illinois Department of Registration and Education for violating the medical practice act and was fined $25 and costs.

Personal.—Dr. Edward L. Moorhead, clinical professor of surgery in Northwestern University Medical School, has been appointed chief of the staff of Mercy Hospital.——Dr. Louis D. Moorhead has been appointed dean of the Medical School of Loyola University.

Historical Society Meeting.—There will be a meeting of the Society of Medical History of Chicago, at the City Club, December 9 at 6:30 p. m., at which a paper in memory of Dr. Mortimer Frank will be read by Dr. Charles B. Reed. Dr. Harold N. Moyer will speak on the "First Neurologist."

Hospital Items.—Jackson Park Hospital is to be erected at Seventy-Fifth Street and Stony Island Avenue, with a frontage of 143 feet. The building will be T-shaped and will contain sixty-eight rooms and will cost $150,000.——An open meeting is to be held, December 10, at the home of Mrs. Julius Rosenwald, in connection with the urgent appeal received from the hospitals in Palestine where a serious shortage of supplies has occurred, particularly as regard towels, soap and washcloths.

School Physicians and Nurses Needed.—In consequence of the failure of the city council to supply funds to pay physicians and nurses to supervise the health and life of schoolchildren, Drs. Frank Billings, James B. Herrick, Joseph L. Miller, Joseph A. Capps and William Allen Pusey have addressed a letter to the newspapers of the city calling on the city council to make provision at once for this most important work, and in the event of their failure to do this, calling on the public to subscribe to a fund, which will enable the health department to carry on this most important work. ——Of the 127 school nurses who were laid off owing to lack of funds, 110 returned to work, November 25. The city council finance committee voted on that day, to transfer $34,825 from health department salvage funds to the nurses' salary account. In addition, the committee agreed that the November and December salaries of 150 school physicians who give half their time to the schoolchildren, shall be paid when the 1920 appropriation bill is passed.

MARYLAND

Personal.—Dr. Ralph B. Seem, Baltimore, for several years assistant superintendent of the Johns Hopkins Hospital and for nearly two years, during the absence of Dr. Winford H. Smith, acting superintendent of the hospital, has accepted the position of superintendent of the Billings Memorial Hospital, Chicago. He will leave the Johns Hopkins Hospital about July 1, 1920, and, after spending several months in Europe, will assume his duties in Chicago.——Dr. Karl H. Van Norman, who, prior to service in the Canadian army, was assistant superintendent of the Johns Hopkins Hospital, has accepted the position of second superintendent of the Johns Hopkins and will assume his duties shortly after January 1. He will have charge of the administration of the dispensary and, according to present plans, will probably succeed Dr. Seem as assistant superintendent.——Dr. Carlisle S. Lentz, who is now in charge of the dispensary at the Johns Hopkins Hospital, will assume charge of the admission office after January 1.——Harry B. Gantt, Capt., M. C. U. S. Army, Millersville, has returned after an absence of more than two years overseas and is now stationed at Camp Dix, N. J., awaiting discharge. Dr. Gantt was for some time on the staff of the Tooting Hospital in London, and then acted as surgeon with the Army of Occupation in an infirmary near Coblenz.——Dr. George F. Sargent, for the last twelve years on the staff of the Sheppard and Enoch Pratt Hospital, Towson, has been appointed surgeon in the reserve corps of the United States Public Health Service. Dr. Sargent will be assigned as adviser to the superintendent of the local U. S. Public Health District, which includes Maryland and the District of Columbia.

MASSACHUSETTS

Personal.—Dr. Frederick T. Clark, Major, M. C., U. S. Army, Westfield, who, up to the time of his discharge from the service, was chief of the ophthalmologic and otolaryngologic service of U. S. Army General Hospital No. 1, New York City, has returned to his home.

Tuberculosis Association Meeting.—The Boston Association for the Relief and Control of Tuberculosis held its sixteenth annual meeting, November 20. It was voted to change the name of the organization to the Boston Tuberculosis Association. Dr. George S. C. Badger was elected president, and an executive committee was elected consisting of the president, Dr. Vincent Y. Bowditch, Mr. James N. Clark, Miss Isabel F. Hyams, Mr. P. J. McCormack, Dr. James J. Minot, Mr. George S. Mumford, Dr. Edward O. Otis, Miss Lillian V. Robinson, Dr. Arthur K. Stone, Mrs. Frederick M. Stone, Dr. William C. Woodward and Mr. Arthur V. Woodworth.

Lowell and Cutter Lectures.—Dr. Thomas M. Legge, chief medical inspector of factories in Great Britain, is giving the Lowell-Cutter lectures in preventive medicine this year. The lectures are given under the auspices of the School of Public Health of Harvard University, the Massachusetts Institute of Technology and the Division of Industrial Hygiene.

Lowell Lectures (Huntington Hall, 491 Boylston Street, 8 p. m.).—November 24, Industrial Diseases under the Medieval Trade Guilds; November 26, The Spirit of Work under the Medieval Trade Guilds; December 1, Modern Industry and Art; December 4, The Edward Medal and Gassing Accidents; December 8, Industrial Poisons and their Prevention; Dec. 11, Anthrax.

Cutter Lectures on Preventive Medicine and Hygiene (Harvard Medical School, Amphitheater Building E., 240 Longwood Avenue, 5 p. m.).—December 8, Twenty Years' Experience of the Notification of Industrial Diseases under the Workmen's Compensation Act; December 9, Industrial Diseases under the Workmen's Compensation Act; December 10, Medical Supervision in Factories.

MINNESOTA

Venereal Disease Clinics in Minnesota.—At the present time six distinct clinics are being carried on and financed in large part by the Minnesota State Board of Health. These clinics are: one for men and one for women in St. Paul, at the St. Paul Dispensary; this is backed jointly by the United Charities, the Wilder Charities and the state department. A clinic for men in cooperation with the University of Minnesota. A clinic for women operated by the state department and the city board of health at the City Hospital, Minneapolis. In Duluth, in rooms and with nurses furnished by the St. Mary's Hospital, a clinic for men and one for women is operated by the state department and the city board of health.

MISSOURI

Reunion of Base Hospital Personnel.—A reunion banquet of the officers and enlisted personnel of Base Hospital Unit No. 28 was held in Kansas City, November 6. Dr. John F. Binnie, Kansas City, presided as toastmaster.

Maternity Home Closed.—The maternity home conducted by Dr. A. L. Gray at St. Joseph has been closed. The St. Joseph Hospital will establish a maternity ward and Dr. Gray has been invited to take charge of that division of the hospital work.

Municipal Venereal Disease Clinics.—Dr. R. L. Russell, Humansville, director of the venereal disease division of the state board of health, has established three municipal disease clinics in which 3,184 patients had been treated up to the middle of November.

Personal.—Dr. Harry M. Moore, St. Louis, has been appointed surgeon in charge of the Frisco Railway Hospital, Springfield.——Dr. Joseph McNearney, Florissant, physician to the state penitentiary, Jefferson City, has resigned and Dr. William A. Clark, Jefferson City, has been appointed to fill the position temporarily.

Hospital Items.—Edina has announced a campaign for funds to establish a hospital for that city and Knox County. ——The Johnson Sanitarium, Springfield, which was recently purchased by the Springfield Hospital, has been renamed the Ozark Sanitarium and will be conducted as a mental and nervous disease department of the hospital. Dr. W. R. Summers, Springfield, will be in charge of the sanatorium. ——A clinic was conducted by the welfare board staff at Noyes Hospital, St. Joseph, November 28.

NEW YORK

Diphtheria Increased.—During October, 575 more cases of diphtheria were reported in the state, exclusive of New York City, than were reported for September, and 945 more than for October, 1918. One third of the new cases were reported from Buffalo.

Personal.—Dr. Eugene N. Nesbitt, Brockport, has been appointed tuberculosis specialist for Grand Rapids, Mich.—— Dr. Edward H. Codding, health officer of New Rochelle, has been appointed chairman of the health center committee.——

Dr. Hermann M. Biggs, state commissioner of health, has been elected a life member of the New York State Organization of Public Health Nursing.

Central District Physicians Meet.—The annual meeting of the Medical Association of Central New York was held in Syracuse, October 30. Rochester was selected as the next place of meeting and the following officers were elected: president, Dr. Owen E. Jones, Rochester; vice presidents, Drs. Nelson G. Russell, Buffalo, and Howard I. Davenport, Auburn; secretary, Dr. Robert Burns, Syracuse, and treasurer, Dr. Thomas F. Laurie, Syracuse.

Laboratory Directors Organize.—At the meeting of directors of public health laboratories of New York state, held in Albany, November 12, it was voted to form a permanent organization to be known as the New York State Directors of Public Health Laboratories. Dr. Warren B. Stone, Schenectady, was elected president; Dr. Joseph S. Lawrence, Albany, vice president, and Miss M. B. Kirkbride, state laboratories, Albany, secretary-treasurer.

New York City

Harvey Society Lecture.—The fourth lecture of the Harvey Society by Dr. E. C. Kendall of the Mayo Clinic, Rochester, Minn., on "The Chemistry of the Thyroid Secretion," will be delivered at the New York Academy of Medicine at 8:30 p. m., December 13.

"Live Longer Week."—Health Commissioner Royal S. Copeland announces that the department of health has set apart the week beginning January 2 as "Live Longer Week." Elaborate plans are being made for a health campaign that will reach every inhabitant in the greater city.

Personal.—Dr. Harold W. Lyall, formerly with the New York City Research and Antitoxin Laboratory, Otisville, has been appointed bacteriologist in the division of laboratories and research, New York State Department of Health at Albany.——Dr. Jacob Sobel has been appointed professor of hygiene in the Fordham University Medical School.

Medical Society of the County of New York Elects.—At its annual meeting, held November 24, the Medical Society of the County of New York elected the following officers for the ensuing year: president, Dr. Charles H. Chetwood; vice presidents, Drs. George Gray Ward and Orrin S. Wightman; secretary, Dr. Daniel S. Dougherty; assistant secretary, Dr. J. Milton Mabbott; treasurer, Dr. James Pedersen.

Two Anthrax Victims.—During the second and third weeks of November, Bellevue Hospital has had two cases of anthrax. The first patient, a man from the Bronx, died, while the second, a girl employed in a shaving brush factory, who was taken to the hospital, November 1, was discharged cured, November 21. This makes twelve cases of anthrax treated at Bellevue Hospital during the past four years, six of whom have been treated by the use of the Eichhorn serum and have recovered.

Birth Control Act Constitutional.—The supreme court, November 17, dismissed without an opinion, for lack of jurisdiction, the appeal of Margaret Sanger, on the constitutionality of the New York State Birth Control Act. Mrs. Sanger was sentenced to thirty days' imprisonment for conducting a birth control clinic in Brooklyn. She appealed from this sentence to the appellate division of the supreme court, claiming that the law prohibiting the dissemination of birth control information was unconstitutional.

Association of Cardiac Clinics.—The first postwar meeting of the thirteen clinics which make up the Association of Cardiac Clinics was held at the New York Academy of Medicine, December 2. Dr. Joseph C. Roper gave his experiences with special charts for cardiac clinics; Dr. Herbert S. Carter presented his ideas on districting of the city for cardiac patients; Drs. Charles Hendee Smith and Frederic L. Brush, White Plains, spoke on the relations between cardiac clinics and convalescent homes, and Dr. William P. St. Lawrence discussed the relations between the cardiac clinics and the public schools.

Lectures on Psychology.—Several courses of lectures on psychology as applied to medicine have been instituted at Columbia University by the Students Pre-Medical Association. The course consists of six lectures dealing with the various phases of psychology which are of use to the physician, and the ways in which he can apply them. The abstract principles of psychology will also be presented. The opening address will be delivered by Prof. A. T. Poffenberger. There will be other speakers, and lectures will also be delivered by Professors Woodward and Hollingsworth of the department of psychology. Each lecture will be followed by a general discussion.

Hospital Drives.—The campaign to raise $1,000,000 for the United Hospital Fund, which began, November 23, and continued for ten days, at the end of the first six days had only three fourths of the needed million in sight. Many of the forty-six hospitals belonging to the fund will be compelled to make individual campaigns to enable them to meet their annual deficits. One of the features of the campaign was a parade of the ambulances belonging to each of the forty-six hospitals from Harlem to the Battery.——The drive to raise $100,000 for the Bronx Hospital, which was to have been held during the week of November 23 was postponed until the following week. The medical board of the Bronx Hospital at a recent meeting adopted resolutions which will make the institution an open hospital, so that physicians may enter private patients there and treat them without interference. According to statements made at the meeting, there are only three hospitals in this city where this can be done.

PENNSYLVANIA

Hospital Memorial at Chester.—Prominent citizens of Chester and vicinity were present at Chester Hospital, October 23, to witness the acceptance of a new building, which was constructed as a memorial to the late Mrs. Margaret A. Houston, the gift being made by her sons.

Twenty-Fifth Anniversary Meeting.—A buffet luncheon of the Harrisburg Academy of Medicine was held, November 20, to celebrate the twenty-fifth anniversary of the society. The principal address of the meeting was made by Dr. Lewellys F. Barker, Baltimore, on "Group Study by Internists."

Service Men Honored.—Members of the Cambria County Medical Society who served in the world war were honored by their fellow members at a banquet, held November 13, at Johnstown. The society sent forty-six of its men to the various services and all returned safely. Dr. H. F. Tomb, Johnstown, acted as toastmaster.

Priestley Home Bought.—Graduate chemists of the Pennsylvania State College have purchased the original home and laboratory of Dr. Joseph Priestley, the discoverer of oxygen. The house is located on the banks of the Susquehanna River, at North Umberland, and it is planned to move it to the campus at State College and make it a memorial to the great scientist.

Personal.—Dr. D. F. Unger, Mercersburg, the oldest member of the Franklin County Medical Society, was the guest of honor at the November meeting of the organization.——Dr. George A. Deitrick, Sunbury, has been appointed local surgeon of the Philadelphia and Reading System, succeeding Dr. William L. Shindel, deceased.——Dr. Charles Roland resigned as health officer of Reading, October 29.——Dr. Harry E. Clark, Pittsburgh, has been appointed superintendent and medical director of the City Poor Farm, Mayview.——Dr. J. Bruce McCreary, Shippensburg, has been appointed supervising medical director in charge of health supervisory work in a district composed of Perry, Franklin, Adams and Cumberland counties.——Col. T. Lyle Hazlett, Pittsburgh, who was a surgeon of the Keystone Division in France, has been appointed medical director at the Mont Alto Sanatorium, succeeding Dr. F. C. Johnson, who has been granted a leave of absence.

Philadelphia

Industrial Physicians and Nurses Organize.—The Philadelphia Association of Medicine for physicians and nurses in industrial work was organized at the City Club, November 28. Dr. C. Taylor, physician for the Bell Telephone Company, was elected president; Dr. L. E. Hastings of the J. G. Brill Company, vice president; Dr. J. Gay of the New York Shipbuilding Company, secretary, and Dr. F. Cummings of the Curtis Publishing Company, treasurer. There are twenty-six charter members. The organization is to include the entire Philadelphia industrial district.

Personal.—Dr. Charles Lincoln Furbush, a former surgeon in the U. S. Army, and at one time director of the charities and hospitals in Havana, Cuba, has been named director of public health and charities by the mayor elect, J. Hampton Moore, as successor to Dr. Wilmer Krusen. Dr. Furbush was decorated as Companion of the Order of St. Michael and St. George by the Prince of Wales during his visit to Philadelphia, November 22.——Drs. J. M. Sterling, Norman S. Rothschild and John D. Donnelly have been appointed to positions in the Henry Phipps Institute by Dr. Edward Martin, state health commissioner.

CANADA

Epidemic Encephalitis.—The death of a dentist from encephalitis lethargica has been reported from Calgary, Alta. Seven deaths have been reported from Winnipeg, and one case has been diagnosed in Toronto.

Hospital News.—Orpington Military Hospital in England, an institution founded by the Ontario government, has recently been sold for $400,000. It will be used as a central depot for cripples and permanently wounded men of the Imperial army.——The Toronto General Hospital has been ordered closed to visitors on account of the smallpox epidemic in that city. The cases now number more than 700.

Public Health News.—The new farmer-labor government of Ontario has placed the health department under the minister of labor, who is now recognized as the minister of labor and public health. By this arrangement, Dr. J. W. S. McCullough, Toronto, chief officer of health for Ontario, will be required to serve under two ministers of the crown, as he retains the office of deputy-registrar general under the department of the attorney-general of the province.

Personal.—Sir Thomas G. Roddick, Montreal, will spend the winter in Florida.——Dr. J. W. Brien, Essex, Ont., member of parliament, has been appointed medical officer to conduct a company of Chinese to their own land, after overseas service.——Dr. James Third, Kingston, Ont., professor of practice of medicine in Queen's Medical College, has resigned.——Dr. C. W. Service, who has been in China for fourteen years, is spending a furlough in Toronto.——Dr. G. B. Archer, Toronto, who has been in France since 1916, is returning to his old work at Ranaghat, Bengal, sailing from Victoria, December 16.——Dr. Davidson D. Black, Toronto, has been appointed to the anatomical department of the Medical University, Peking, and has arrived in China. ——Dr. H. P. Rogers, after four years' service in Mesopotamia and Syria, has returned to Toronto.

Baby Saving Week for Halifax.—Halifax, N. S., had a "Baby Saving Week," from November 4 to 13, inclusive, under the auspices of all the welfare organizations of the city. There were three sessions daily, the first mainly for schoolchildren, at which they witnessed moving pictures and then had the exhibits explained to them. The afternoon and evening sessions were devoted to discussions on various health activities for babies. Among the principal topics discussed were "Nova Scotia's Baby Problems, Past and Present," "Better Babies for Nova Scotia," "Why Halifax Needs Plans for Babies," and "The Value of a Baby Life." At subsequent sessions the protection of babies from disease and the care of babies were discussed. The loaned exhibits occupied six booths, containing a mental and social hygiene exhibit, sent by the public welfare bureau of Montreal, and there were also eight booths carrying graphic exhibits, and three booths used in measuring, weighing and judging the improvement of babies for six months, under the care of the Victorian Order of Nurses.

GENERAL

Academy Election.—At the annual meeting of the Interurban Academy of Medicine, whose membership is composed of physicians of the twin ports of Superior, Wis., and Duluth, Minn., held in Superior, November 19, Dr. Richard C. Smith, Superior, Wis., was elected president; Dr. Carl A. Scherer, Duluth, Minn., vice president; Dr. Herbert J. Orchard, Superior, Wis., secretary, and Dr. Alex J. Braden, Duluth, Minn., treasurer.

Bequests and Donations.—The following bequests and donations have recently been announced:

Rochester, N. Y., General Hospital, $1,000; Jewish Orphan School, and Jewish Orphan Asylum, each $200, by the will of Carrie D. Ettenheimer, Rochester.

Dr. Harry A. Davidson, Louisville, Ky., $20,000, by the will of his aunt, who died in Berlin, Germany, in June, 1918.

Silver Cross Hospital, Joliet, Ill., $5,000, St. Joseph's Hospital, Joliet, Ill., $2,000, by the will of Eben Nimmons of Plainfield, Ill.

Hahnemann Hospital, Chicago, $100,000, to endow beds in memory of her late father, Dr. Stephen Seymour, by the will of Mrs. Catherine E. Brown, Evanston.

New Medical Society.—A new medical society has been organized at Sharon, Conn., known as the Harlen-Dally Medical Association, whose membership includes physicians from East Dutchess County, N. Y., and West Litchfield County, Conn. The following officers were elected: president, Dr. L. E. Rockwell, Amenia, N. Y.; vice president, Dr. A. F. Hoag, Millerton, N. Y.; secretary, Dr. C. W. Bassett, Sharon, Conn., and treasurer, Dr. A. L. Tuttle, Salisbury, Conn.

National Committee for the Prevention of Blindness Meets.—The National Committee for the Prevention of Blindness held a meeting in New York, November 24. Edward M. VanCleve, managing director, outlined the accomplishments of the society. Starting in 1915 with sixty-five charter members, it has now enrolled nearly 2,300 members in forty-seven states, in Cuba, the Philippines, Porto Rico, Mexico, China and Canada. It has pushed laws for the prevention of blindness and had them passed in eighteen states. Among those who addressed the meeting was Dr. Thomas D. Wood, New York, chairman on health problems in education of the National Council of Education. He stated that from 25 to 35 per cent. of the schoolchildren in this country have eye defects. At least 75 per cent. have something the matter with their health which lowers their efficiency. All but a small proportion of these eye defects can be remedied, but unfortunately so far only a few of the five or seven millions of children so handicapped have had the attention they need. The speaker advocated the periodical examination of the eyes of schoolchildren.

Food and Nutrition.—The National Research Council has formed a special committee on food and nutrition problems, composed of a group of physiologic chemists and nutrition experts. This committee will devote its attention and activities to the solution of important problems connected with the nutritional values and most effective grouping and preparation of foods, both for human and animal use. Special attention will be given to national food conditions and to comprehensive problems involving the coordinated services of numerous investigators and laboratories. The committee, with the support of the council, is arranging to obtain funds for the support of its researches, and will get under way, just as soon as possible, certain specific investigations already formulated by individual committee members and subcommittees. These include studies of the comparative food values of meat and milk and of the conditions of production of these foods in the United States, together with the whole problem of animal nutrition; the food conditions in hospitals asylums and similar institutions; the nutritional standards of infancy and adolescence; the formation of a national institute of nutrition, and other problems of similarly large and nationally important character.

Deaths Following Toxin-Antitoxin.—On recommendation of the city board of health of Dallas that toxin-antitoxin be given as an immunizing agent against diphtheria, several hundred doses were administered by private and municipal physicians. Forty severe reactions followed the administration of a particular series issued by one manufacturer. The children who received this series manifested a severe reaction characterized by high fever, vomiting and pain at the site of injection, which occurred a few hours after administration. Within forty-eight hours the skin over the site of injection became intensely inflamed; the area extending over the forearm, shoulder and hand, and in some cases across the chest. Large vesicles filled with clear fluid appeared. General reaction subsided within four to six days and the local reaction within eight to ten days. Five deaths occurred in this series from twelve to sixteen days following the administration of the toxin-antitoxin, death being ascribed to acute myocarditis. The local reaction had disappeared a few days previous to death. No postmortem examinations were made, but the symptoms and physical signs which occurred were due to excessive amounts of toxin. All other series of toxin-antitoxin issued by this manufacturer and all ordinary antitoxin used were found to be harmless and not followed by reaction.

Smallpox Quarantine Established at Canadian Border.—More than 4,000 cases of smallpox have recently occurred in the province of Ontario, and four cases have been found in Buffalo, according to New York State Department of Health officials, who have investigated conditions at the border under instructions from Dr. Hermann M. Biggs, state commissioner of health. In response to a telegram from Surgeon-General Blue of the U. S. Public Health Service to Commissioner Biggs, requesting advice as to the necessity for establishing a quarantine at the border, the commissioner replied that conditions warrant such action. A quarantine is to be established immediately at all bridges and ferries leading into the United States from the infected territory and all persons who cannot give proof of recent vaccination or of having had the disease will be turned back. Health officials of border cities have been notified in regard to the conditions to be imposed, and railroad ticket offices in the Canadian

district where the disease exists have been requested not to issue tickets to points in the United States except on the presentation of a certificate of vaccination from U. S. Public Health Service representatives. About seven eighths of the 40,000 schoolchildren of Toronto have been vaccinated and the remainder will not be permitted to attend school until they have complied with this requirement. All travelers into New York and Michigan must show certificates that they have been vaccinated within one month. At Black Rock, November 26, forty-seven persons were held on one train until they could be vaccinated.

Hookworm a Blight in the Draft Army.—Part I of the annual report of the Rockefeller Foundation, made public, November 26, summarizes the results of investigations on hookworm in the Southern states. The report points out that the examinations for hookworm disease made among United States soldiers confirm in a striking way the board's experience of the last few years. "Judged by the Binet-Simon and other tests, many full-grown soldiers who harbored comparatively few hookworms had the mentality of persons only 12 years of age. The mentality of 10,000 men at Camp Travis who harbored these parasites was about 33 per cent. below normal." Mental tests of a similar nature among 340 schoolchildren in Queensland, Australia, showed that there was an average retardation of approximately two years among heavily infected children. The longer the infection persisted the greater was the retardation. Statistics are cited showing that the efficiency of laborers in various localities in Costa Rica, India and other localities has been increased 50 per cent. after hookworm treatment was put into operation. Encouraging reports of campaigns against hookworm are related, and the report reiterates the great service they have done to communities by demonstrating to the public its responsibility for general health, and stimulating it to a willingness to finance and carry on public health work of its own. A part of the report is devoted to the work that the Yellow Fever Commission of the Rockefeller Foundation has done during the past year and speaks encouragingly of the prospect of demonstrating that the true etiologic agent of yellow fever has been discovered by Dr. Hideyo Noguchi, which he has designated as *Leptospira icteroides*. The report tells of the demonstration, through the fight on yellow fever conducted by the board in Guatemala, that this scourge could be controlled with the personnel and facilities available in Central American countries and at a cost well within their financial ability. The report concludes with an account of the progress made in public health training through the establishment of a department of hygiene in the Faculdade de Medicina e Cirurgia at São Paulo, Brazil.

FOREIGN

Influenza in Spain.—More than 2,000 cases of influenza have been reported at Lenares, about 50 miles northeast of Granada, Spain.

Hospital Ship Disabled.—A torpedo boat has towed the British hospital ship *King Edward* into Christiansand, Norway. The *King Edward*, which was sailing from Murmansk to London, was caught in a storm and disabled.

Motor Cars Needed.—The great scarcity of motor cars in England is reported to be a severe handicap to physicians. The British Medical Association has made an appeal to manufacturers to give priority to those who require automobiles for use in their practice.

Physicians Elected to Italian Senate.—Five professors in the Italian medical faculties were elected to the senate at the recent elections. The list includes Drs. Queirolo, Bianchi, Pascale, Rampoldi and Rattone, representing Pisa, Naples, Pavia and Parma. The president of the Italian Red Cross, a lawyer, was also elected to the senate.

Cinema in Obstetric Teaching.—November 6, Dr. G. Drummond Robinson, obstetric physician to the Westminster Hospital, demonstrated to the Royal Society of Medicine a cinematograph film illustrating the processes of normal labor, which is intended to improve the teaching of midwifery to medical students and midwives. The film comprised some 25,000 photographs from life and diagrams.

Bubonic Plague in Constantinople.—Major Davis G. Arnold, director of the Near East Relief, addressed newspaper men of Constantinople—Greeks, Armenians, Jews, and French Levantines—at a meeting in Constantinople, asking them to aid the Near East Relief in its fight against the bubonic plague. More than $40,000 worth of soap, linen and medicines are being distributed by the committee in Constantinople every month.

Deaths in the Profession Abroad.—Dr. **E. Bonardi**, chief of the large public hospital at Milan, professor of social medicine at the graduate school there, and author of works on various fields of medicine and geology.——Dr. **H. Aronson**, a Berlin bacteriologist who introduced certain serums and culture methods, aged 54.——Dr. **L. Brieger**, professor of internal medicine and hydrotherapy at the University of Berlin, aged 70.——Dr. **J. A. Amann**, a gynecologist of Munich, aged 53.

Cambridge Institute of Parasitology.—Mr. and Mrs. P. A. Molteno have announced their intention to provide funds for the erection and maintenance of an institute for parasitologic research in the University of Cambridge. They have offered a sum of £20,000 to provide a suitable building, with its fittings, for this work, and a further sum of £10,000 to form a fund to provide an income for the upkeep and maintenance of the institution, any surplus being used to further research carried on in the institute at the discretion of the director.

The Plague of Venereal Diseases.—The *Nederlandsch Tijdschrift* quotes the *Medizinische Klinik* of Berlin to the effect that the spread of venereal diseases there since the war has surpassed even the extreme prognostications. Enlightenment, warnings and penalties are proving futile to check the plague, although there have been provided ample opportunities for treatment under specialists (*Salvarsanitätsräte* they have been called). The only way to stem the flood is to keep the contagious in the hospitals. But the hospitals are crowded, and the medical journal suggests the advisability of putting up a large number of barracks at once for the purpose of housing the contagious cases of venereal disease. The great difficulty with this is said to be the lack of lumber for building the barracks.

Typhus in Europe.—A cable despatch states that typhus is sweeping Russia, an alarming increase of cases having set in during October. The *Public Health Reports* of Oct. 17, 1919, list 2,835 cases at Archangel and Riga during May and June. The same issue states that 3,125 cases of typhus were recorded at Cairo, January 1 to July 1. Typhus has been also present in fourteen provinces in Italy, and in the first week in June 3,470 cases were reported, but 3,321 of these were in Austrian prisoners. In the second week in July fourteen cases were recorded, and in the first week in August only six cases. The *Medicina Contemporanea* relates that a few small epidemic foci have developed at various points in Portugal and Spain, and as the first cases were mistaken for typhoid—even antityphoid vaccine being given at some points—the disease got good headway before it was recognized.

Heat for Physicians in Berlin.—The coal controller at Berlin is said to have relented from his former denial of special coal privileges to physicians, and the *Nederlandsch Tijdschrift* states that now elevators in doctors' residences can be run during office hours, and elevators can be run also for the sick who present a medical certificate to the effect that they are unable to climb stairs. The central water heating plant may also be operated when more than one physician is in the residence. Gas stoves can also be used by physicians who have a card from the medical chamber, and gas water heaters can be used by the sick who have a medical certificate to the effect that they need baths. It is further stated that efforts will be made to supply physicians with fuel alcohol (*Brandspiritus*) for sterilizing instruments and for illuminating purposes during the hours the gas is turned off. Fuel alcohol is said to give an illuminating flame when mixed with some substance with much carbon content, such as xylol.

Spanish Physicians Win Strike.—As already mentioned in THE JOURNAL the municipal physicians of Jerez, Spain, decided some time ago to discontinue discharging their official duties, in view of the fact that the municipality owed them 135,000 *pesetas* (about $27,000) and the refusal of the authorities to give satisfaction about the matter. The situation became so serious that the national government had to interfere finally, and dismiss the offending municipal council. A new council was appointed, one of the first steps of which was to pay on account 75,000 *pesetas* (about $15,000) to the physicians, promising to pay the balance in a very short time. The attitude of the Jerez physicians had met with the general approval and support of the physicians from other parts of Spain. The Association of Physicians of Catalonia offered to the Jerez physicians the sum of 50,000 *pesetas* (about $10,000), but this was declined with thanks. This is probably the first time that physicians have in a body actually gone on a strike in defense of their rights.

Polish Typhus Relief Expedition.—The thirty-second train load of supplies and equipment for the typhus campaign arrived in Warsaw, October 23, and six additional medical officers and four commissioned officers of the line have arrived, but the need for medical officers is still urgent. Up to October 27, thirty-one commissioned officers and 420 enlisted men had arrived in Poland for duty with the expedition. The field columns are doing extensive work at Wlodawa, where much opposition was at first encountered, but conditions have now so changed that it requires military assistance to keep the people away from the bathing and delousing plants. Col. Harry H. Snively, M. C., U. S. Army, Columbus, Ohio, director of field operations, reported that at Lemberg 50,000 people were waiting to be bathed and deloused. A detachment of the expedition has proceeded to Galicia to guard a trainload of gasoline to be shipped from that field. Col. Harry L. Gilchrist, M. C., U. S. Army, in command of the expedition, announces that field columns will be bathing and delousing in the cities of Przedborz, Slomniki, Wlodawa and Lwow, and that supplies will be distributed throughout the district of Lublin, Kielce and Lodz as soon as transportation facilities are provided.

Congress of Northland Internists.—The Ninth Nordiske Congress for Internal Medicine was held at Copenhagen in August, Professor Faber presiding, the first meeting for several years. The main theme for discussion was the importance of dieting in the management of insufficiency of the heart and kidneys, introduced by Rubow and Motzfeldt. One session was devoted to diabetes. Faber showed that the blood sugar has three peaks during the day corresponding to the principal meals, and insisted that for each person there is a constant constitutional level for the sugar in the blood, above which limit sugar passes into the urine. Lundsgaard suggested that with grave diabetes it might be sufficient to keep the morning urine free from sugar. Lundsgaard's explanation that cyanosis is the result of increase in the amount of unoxidized hemoglobin in the blood has been commented on recently editorially (page 1216). He declared that it is impossible for cyanosis to occur with a hemoglobin percentage of less than 25. Dedichen spoke on the influence of athletics and games on the heart and Kuenisel on the importance of cytologic examination of exudates, Josefson endorsing the value of "diagnosis by minute particles," obtained by puncture from parenchymatous organs, etc. Kylin's device to measure the pressure in the capillaries attracted much attention. He drops oil on the skin and examines it under the microscope. The next meeting is to be held at Helsingfors in 1921, with Siever to preside. Visceral syphilis is the main subject appointed for discussion.

Massacres of Armenian Physicians.—As already mentioned (November 29, p. 1708), the Armenian Medical Association has issued a pamphlet (in French) describing the history—so far as it affects the medical profession—of the organized effort on the part of the Turkish government in 1915 to exterminate the Christian inhabitants of Armenia. The pamphlet emphasizes the "large number of Turkish physicians who took active part in organizing the massacres and deportations . . ." At the head of the special commission—an actual *ministère de déportation et des massacres*—were two physicians, one the professor of legal medicine and deontology on the Constantinople medical faculty. Both of these physicians have fled since the pressure of the Allies has forced Turkey to summon to justice those responsible for the Armenian atrocities. Two of the twenty Turkish physicians specified as engaged in this work are graduates of the Munich medical school, the others of the Constantinople medical school. Among them was Dr. Rechid, who as governor of Diabekir, it is said, caused the massacre of 100,000 Armenians. He committed suicide as he was about to be arrested. A large number of the others are in prison or have disappeared, but some are still occupying their chairs in the Constantinople medical school. The pamphlet gives biographical sketches of the sixty-seven Armenian physicians "massacred and killed." The list includes besides a large number of graduates of the French school at Beirut and several graduates of the American medical school there. Among them was Dr. Minasse Garabedian, who is mentioned as a graduate of the University of Chicago. Three graduated in Paris and one each in Geneva and Lausanne. Dr. N. Daghavarian, graduate of the University of Paris, deputy in the Ottoman parliament, vice president of the Armenian national assembly, author of a number of works in Armenian and French on bacteriology, medicine, and the history of Armenia, was massacred near Ourfa. Another list of fifty-two obituaries represents the victims of typhus, the Turkish physicians sending the Armenians to the more dangerous posts. Among them are two said to have American diplomas and medical degrees, Drs. K. Douzaklian, aged 65, and S. Tchilineguirian, aged 33. The pamphlet adds that the Turkish and German physicians said openly that the only reason why any Armenian physicians were left unmolested was because they were needed in the Turkish military hospitals.

LATIN AMERICA

Physician Appointed to the Cabinet in the Republic of Colombia.—Dr. Luis Cuervo Márquez has recently been appointed by the president of the republic of Colombia as minister of the interior (*cartera de gobierno*). Our exchange, the *Repertorio*, hails the appointment as a merited distinction and promise of brilliant work for the country. The Club Médico of Bogotá celebrated the event with much ceremony.

Ground Broken for New Hospital.—November 15, ground was broken by Dr. Bolisario Porras, president of the Republic of Panama, for the new Santo Tomas Hospital which is to be located in the suburbs of the city of Panama. The new institution, which will be in charge of Major Edgar A. Bocock, M. C., U. S. Army, is being constructed on the administrative plan by a commission of five members nominated by the president of the republic to accomplish the construction work. Separate buildings for the care of tuberculosis, venereal and contagious diseases are included in the plans for the new institution.

Honors to Dr. Decoud.—A special meeting in honor of Dr. D. Decoud was held recently at Buenos Aires on Dr. Decoud's retirement from the chair of clinical surgery. Delfor del Valle spoke of his eminent work as teacher, surgeon and author, and Dr. G. Bosch Arana presented him with a gold medal as a tribute from his colleagues in the San Roque Hospital, and especially from the surgeons of the institution. Dr. Decoud recently received a diploma and medal from the officials of the International Exposition at San Francisco in honor of the opening of the Panama Canal. The medal was awarded for his collected medical works.

Deaths in the Profession.—Dr. **B. Caldora,** a young physician of Buenos Aires, prominent in political affairs.——Dr. **J. H. de Andrade e Silva** at S. Paulo, Brazil, recently returned from work in the Paris hospitals during the war. ——Dr. **L. Rufino,** physician to the Rawson and San Roque hospitals at Buenos Aires, aged 62.——Dr. **L. J. Velarde,** surgeon inspector general of the Argentine navy until his retirement with the grade of surgeon major and pay of a vice admiral (*contralmirante*), aged about 65.——Dr. **A. J. Drago,** a leading medicolegal expert at Buenos Aires and writer on psychopathology and criminology, aged 58.—Dr. **E. D. Zapata** of Bogotá.

Brazil Presents Hospital to Paris.—The Paris medical faculty recently voted to express its gratitude for the gift from Brazil of the hospital at Paris equipped and maintained by Brazil during the latter part of the war. The installation is high grade in every respect, and is said to have cost Brazil 2,500,000 francs. The French army medical service was empowered to retain the hospital for two years, but has abandoned its rights in this respect and will give up the hospital next summer to the civil authorities, so that when the university year opens in November, 1920, a new clinic will be at the disposal of the sick and for teaching purposes to the medical students. The Assistance publique will supply the personnel and maintain the hospital after that date.

Triennial Medical Congress of the Republic of Colombia.—A large and representative gathering of the profession was held at Tunja in August with great festivities, as the date coincided with the centennial celebration of independence day. The congress is memorable further in the history of the organization of the profession, as the Colombian Medical Association was officially founded. The committee of organization includes Drs. J. D. Herrera, C. Esguerra, M. Jiménez López, R. Franco F., R. Amaya Arias and R. Sanmartin, with six alternates, Drs. L. López de Mesa, J. I. Uribe, J. Bajarano, E. Piedrahita, J. del C. Acosta, and M. A. Rueda V. Eighteen resolutions were adopted by the congress, some asking for legislation on means to repress the spread of tuberculosis, hookworm, venereal disease and malaria; one specified eight concrete ways in which alcoholism could be combated. Others asked for legislation to regulate the practice of medicine, to found a national Pharmacopeia "to do away with the present anarchy in the official preparations as dispensed in the pharmacies." Legislation to restrict the sale of "patent medicines" was also demanded, and the

organization of a national public health and public charities department of the government, and the teaching of ethics in the medical schools. One resolution asked for the appointment of commissions to study the fauna and flora of the country, and the foundation of traveling scholarships to enable young physicians to study laboratory and public health and sanitation methods in other countries.

Government Services

Personnel of the Medical Department

For the week ending November 28, there were in the Medical Corps 2,318 medical officers from a total of 30,591 on duty, Nov. 15, 1918. The Medical Reserve Corps contained 3,917, an increase of fifty-eight over the previous week.

MEDICAL OFFICERS, U. S. NAVY, RELIEVED FROM ACTIVE DUTY

CALIFORNIA
Berkeley—Cohn, M. L.

CONNECTICUT
Bridgeport—Smith, E. S.

NEW YORK
Brooklyn—Joseph, D.

NORTH CAROLINA
Winston-Salem—Conrad, H. B.

WASHINGTON
Seattle—Richardson, W.

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

NOTE.—In the following list, L. signifies lieutenant; C., captain; M., major; L. C., lieutenant colonel, and Col., colonel.

ALABAMA
Cardiff—Barker, H. O. (C.)
Montgomery—Lay, H. T. (M.)

ARIZONA
Douglas—Christensen, W. A. (M.)

ARKANSAS
Fort Smith—Wilson, C. P., Jr. (C.)
Monticello—Best, J. M. (L.)

CALIFORNIA
Los Angeles—Bailey, L. H. (C.)
Garvin, C. L. (M.)
Shurtleff, F. C. (M.)
Marshall—Dienst, R. C. (C.)
Marysville—Tapley, F. B. (L.)
Oakland—Fine, H. M. (C.)
San Francisco—Shiels, G. F. (M.)
San Quentin—Paulson, J. E. (L.)

COLORADO
Denver—Sedwick, W. A. (C.)

DISTRICT OF COLUMBIA
Washington—Hough, J. S. (M.)

FLORIDA
Palm Beach — Kenan, O. H. (L. C.)
Sanford—King, O. W. (C.)
St. Petersburg—McClane, J. W. (C.)

GEORGIA
Atlanta—Harrington, F. Y. (L.)
Augusta—Michel, H. M. (C.)
Macon—Webb, F. L. (M.)
Oak Park—Durden, J. W. (L.)

ILLINOIS
Belleville—Hanson, W. L. (C.)
Bushnell—Griffith, J. C. (C.)
Carbondale—Hughes, L. D. (L.)
Chicago—Aisenstadt, E. A. (C.)
Barnes, C. L. (M.)
Clinton, L. B. (L.)
Courtney, C. H. (C.)
Hansen, O. A. (M.)
Hermann, C. B. (L.)
Huber, J. M. (C.)
Hundertmark, A. H. (C.)
Langford, E. K. (C.)
Main, R. B. (L.)
Scott, H. (C.)
Stanton, S. C. (M.)
Steffenson, O. M. (C.)
Moline—Wahlberg, K. W. (L.)
Morrison—Beadles, C. H. (L.)
Rockford — Christenson, A. W. (L.)
Stanford—Herrmann, E. R. (L.)
Sterling—Perry, W. H. (C.)
Vermilion Grove—Ryan, J. G. (C.)
Winchester—O'Reilly, W. (L.)

INDIANA
Columbus—Benham, J. W. (C.)
East Chicago—Hopkins, P. W. (L.)
Evansville—Funkhouser, R. M. (L.)
Everton—Ross, M. (C.)
Gary—Willett, I. H. (C.)
Indianapolis—Buehler, E. (M.)
Gundelfinger, B. M. (L.)
Hare, E. H. (L.)
Hosman, F. L. (L.)
Sowder, C. R. (M.)
Willis, E. A. (C.)
Peru—Spooner, J. P. (M.)
Selma—Jump, S. G. (C.)
Sharpsville—Leeson, A. E. (C.)
Tipton—Gifford, H. S. (C.)
Mozinge, A. E. (C.)

IOWA
Central City—Owen, J. B. (C.)
Des Moines—Callagan, B. J. (C.)
Keokuk—Sherlock, W. P. (L.)
Little Rock—Smith, M. F. (L.)
Stratford—Kail, C. (L.)

KANSAS
Blue Rapids—Reed, W. W. (C.)
Geuda Springs—Fall, N. B. (L.)
Madison—Moore, J. M. (C.)
Stockton—Oeschli, A. B. (L.)

KENTUCKY
Caneyville—Glascock, R. L. (C.)

LOUISIANA
De Ridder—Turner, S. O. (C.)
Elizabeth — Van Schaick, H. D. (L.)

MAINE
Fort Levett—Koyle, F. T. (C.)

MARYLAND
Baltimore—Bronushas, I. B. (L.)
Ostendorf, W. A. (C.)
Winslow, N. (M.)

MASSACHUSETTS
Attleboro—Milot, W. F. (C.)
Boston—Ceconi, J. A. (M.)
Donovan, J. J. (L.)
Peabody, C. W. (L.)
Brockton—Raymond, A. O. (C.)
Essex—Simpson, J. (C.)
Springfield—Bergeron, G. G. (L.)
Wollaston—Erkenbeck, W. J. (C.)
Worcester—Stevens, C. B. (M.)

MICHIGAN
Byron—Boice, H. E. (M.)
Detroit—Newberry, F. H. (L. C.)
Rosen, R. (L.)
Turner, A. (L.)
Grand Rapids—Chamberlin, L. H. (M.)
Kalamazoo—Potter, F. C. (L.)
Rudyard—Bandy, F. C. (L.)

MINNESOTA
Duluth—Spicer, F. W. (C.)
Litchfield—Donovan, J. J. (C.)
Rochester—Peterson, A. (C.)
St. Peter—Blakely, C. C. (C.)
Stillwater—Stebbins, E. B. (M.)

MISSISSIPPI
Ocean Springs — Powell, H. B. (C.)

MISSOURI
Bloodland—Mallette, C. (C.)
Bynumville—Billeter, W. J. (L.)
Carthage—McAllaster, B. R. (M.)
Chamois—Schaerrer, H. (C.)
Hannibal—Hardesty, J. W. (C.)
Koch—Robinson, G. F. (C.)
Monroe City—Malley, J. A. (L.)
Nevada—Haggard, D. (C.)
Parkville—Willis, J. B. (L.)
Sedalia—Trader, C. B. (M.)
St. Joseph—Lynch, T. J. (M.)
St. Louis—Epstein, J. M. (C.)
Pritchett, A. B. (L.)
Telfer, G. A. (L.)
Zachritz, G. F. (L.)
Wyaconda — Swearingen, J. A. (C.)

MONTANA
Richey—Androp, S. (C.)

NEBRASKA
Bennett—DeWolfe, W. W. (C.)
Lincoln—Robinson, L. S. (C.)
Omaha—Bleick, L. C. (C.)
Gilbert, G. R. (C.)
McCarthy, J. D. (L.)
Russum, B. C. (C.)

NEVADA
Owyhee—Russell, R. D. (L.)

NEW HAMPSHIRE
Concord—Sprague, F. A. (C.)
Fort Constitution—Harris, H. I. (L. C.)
Pittsfield—Sargent, A. F. (L.)

NEW JERSEY
Camden—Shoemaker, J. L. (L.)
Greystone Park — Fisher, E. M. (C.)
Hoboken—Pinto, N. W. (L.)
Lakewood — Schauffler, W. G. (Col.)
Newark—Young, J. J. L. (L. C.)
Paterson—Graham, A. F. (C.)
Penns Grove—Cook, G. L. (C.)
Pompton Lakes—Vreeland, C. L. (M.)
Woodbury—Campbell, S. (L.)

NEW MEXICO
Ingleville—Washburn, W. R. (L.)

NEW YORK
Bayonne—Kresch, P. (L.)
Brooklyn—Brennand, E. C. (C.)
Dorian, J. S. (C.)
Haskell, I. D. (L.)
Shack, I. E. (L.)
Traynor, H. A. (L.)
Wynn, R. S. (C.)
Gloversville—Pannaci, C. F. (C.)
Goshen—Hamilton, B. C. (L.)
Irvington—O'Connor, E. T. (C.)
Morton—Richman, R. D. (C.)
New York—Gable, L. M. (M.)
Goodman, H. (L.)
Harrison, M. H. (L.)
Haseltine, S. L. (L.)
Haynes, C. E. (C.)
Jacques, W. A. (C.)
Mulholland, A. M. (C.)
Ryan, T. J. (L.)
Smith, H. M. (L.)
Terriberry, W. S. (Col.)
Oneida—Flamm, G. (L.)
Pelham—Simonson, L. M. (M.)
Poughkeepsie — Cromwell, C. D. (M.)
McNeil, C. L. (L.)
Tubb, C. E. (L.)
Rochester — Bachmann, G. W. (M.)
Goundry, T. J. (C.)
Rockville Center—Seaman, B. W. (C.)
Saratoga Springs—Houghton, J. T. (C.)
Syracuse—Goldstein, A. T. (L.)
Westfield—Busch, G. J. (C.)
Yonkers—West, T. S. (C.)

NORTH CAROLINA
Franklinton—Winston, A. R. (L. (C.)
Sylva—Wilkes, G. (C.)
Winston-Salem — Chaney, T. M. (M.)

NORTH DAKOTA
Beach—McNab, A. B. (C.)

OHIO
Ashtabula—Stewart, N. E. (C.)
Bloomingburg—McDonald, E. H. (L.)
Cleveland—Crow, A. G. (L.)
Wolf, E. E. (L.)
Columbus—Dysart, N. C. (C.)
McKay, W. H. (C.)
Findlay—Pennington, P. C. (C.)
Marysville—MacIver, A. (M.)
Newark—Turner, V. R. (L.)
New Vienna—Brown, H. M. (C.)
Van Wert—Leake, N. E. (C.)

OKLAHOMA
Milfay—Murray, L. P. (C.)
Ochelata—Sherwood, R. G. (C.)

PENNSYLVANIA
Aspinwall—Ross, W. F. (C.)
Canonsburg—Wilson, J. E. (L.)
Centerport—Tryon, L. R. (C.)
Hollidaysburg—Shaw, B. E. (L.)
Lancaster—Jones, W. H. (L.)
Latrove—Eiseman, P. C. (L.)
New Castle—Schenck, F. (L.)
New Holland—Hendrixson, L. H. (L.)
Philadelphia — Armstrong, T. M. (C.)
Burge, F. W. (C.)
Case, C. E. (L.)
Cole, A. N. (C.)
Crowley, W. H. (C.)
Kemner, E. W. (L.)
MacKay, W. H. G. (L.)
McIver, R. B. (C.)
Sharpe, A. M. (L.)
Smith, L. G. (L.)
Walp, G. B. (C.)
Wilderman, H. (L.)
Woomer, L. E. (L.)
Pittsburgh—Baird, J. S. (C.)
Cochane, R. M. (L.)
Giles, H. J., Jr. (L.)
Mann, J. W. (L.)
Pottsville—Shultz, L. M. (C.)
Simpson—Gryczka, F. B. (L.)
Tobyhanna—Rhoads, A. L. (L.)
Wayne—Fallon, L. F. (C.)
Wernersville—Massey, F. F. (L.)
West Chester — Grauten, V. J. (L.)

RHODE ISLAND
Providence—Healey, J. J. (L.)

SOUTH CAROLINA
Chester—Ross, H. M., Jr. (C.)
Pinewood—Harvin, F. M. (C.)
Ridgeland—Grimball, I. H. (L.)

SOUTH DAKOTA
Sioux Falls—Nessa, N. J. (L.)

TENNESSEE
Chattanooga—Hillas, W. J. (M.)
Elkton—Baugh, W. P. (C.)
Greenbrier—Winters, W. W. (C.)
Maynardville—Skaggs, J. S. (L.)
Memphis—Conley, H. P. (L.)
Nashville—Lanier, L. M. (L.)
Union City — Chandler, O. B. (C.)

TEXAS
Aspermont—Wylie, D. C. (C.)
Austin—Fowler, C. F. (L.)
Big Spring—Davis, R. L. (C.)
Blanco—Barron, W. M. (L.)
Dallas—Moursund, W. H. (M.)
El Campo—Gray, C. W. (L.)
Houston—Wilson, R. D. (M.)
Hubbard—Lowry, R. K. (C.)
Knox City—Masters, W. J. (L.)
Mineral—McMahan, J. W. (C.)
San Antonio—Higgins, C. C. (C.)
McAdon, L. F. (C.)
Santo Tomas—Keller, H. S. (M.)
Smithville—Jones, G. M. (C.)
Sylvester—Grimes, R. I. (M.)
Temple—Gough, H. W. (L.)
Victoria—Borden, J. L. (L.)

VIRGINIA
Clear Brook—Dovell, C. E. (C.)
Hampton—Wood, T. M. (L.)

WEST VIRGINIA
Charleston—Parsens, A. L. (L.)

WISCONSIN
Beloit—Hecker, W. (C.)

Foreign Correspondence

PARIS

Nov. 6, 1919.

Congress of Urologists

Among the subjects discussed at the nineteenth Congrès français d'urologie, held in Paris, October 8-11, was treatment of nontuberculous pyelonephritis.

NONTUBERCULOUS PYELONEPHRITIS

Dr. Paul Ertzbischoff, formerly chief of the clinic for diseases of the urinary tract at the Faculty of Medicine of Paris, presented an interesting report on this subject. He pointed out the various causes of pyelonephritis and the different lesions that characterize it, and then drew the conclusion that a uniform method of treatment was impossible, but that the method used would necessarily vary with the case. Thus, while we are virtually powerless to prevent the development of descending ureteropyelonephritis, therapeutic means are available, up to a certain point, to prevent ascending ureteropyelonephritis by a rational treatment of disorders of the ureter, the prostate and the bladder. All who are suffering from urinary or general contagious diseases should avoid chilling or any cause capable of producing a renal congestion. By an appropriate diet intestinal fermentation should be decreased and constipation should be guarded against. Also undue use of diuretics, balsamics and kidney irritants should be avoided.

Once the diagnosis of pyelonephritis has been made, the treatment will vary according as the condition presented is acute or chronic pyelonephritis. In the former case medical treatment should always be instituted unless there are urgent reasons for surgical intervention. Absolute rest should be prescribed. In the lumbar region a cupping glass or mustard poultice should be applied to effect revulsion. The pain should be relieved by hot compresses. To bring about the evacuation of pus and microbes, diuretics and urinary antiseptics will be prescribed. In certain cases more active intervention will be required, and it may be necessary to reestablish diuresis by means of subcutaneous or intravenous injections of artificial serum. The glucose serums are especially indicated, either in isotonic or in hypertonic solution. In the majority of cases the acute symptoms subside under the influence of medical treatment. But things may turn out differently, and in that case we should have recourse to local treatment. Distention of the bladder, as recommended by Pasteau, should be done, and if that does not suffice, cystoscopic catheterization of the ureter and lavage of the pelvis of the kidney with a weak, tepid antiseptic solution is indicated (boric acid or borax solution, potassium permanganate and especially silver nitrate). Immediately after the lavage several cubic centimeters of a 3, 4 or 5 per cent. silver nitrate solution, of a 1, 2 or 3 per cent. protargol solution, or a 5 per cent. collargol solution should be instilled into the renal pelvis. Lavage of the renal pelvis is contraindicated in patients suffering from acute urethritis or an aggravated form of cystitis; also if the general condition of the patient is bad.

If, in spite of treatment, the patient does not improve; if one of the kidneys is sound, while the other is in frankly bad condition, nephrectomy should be done at once, unless the general health of the patient is precarious, in which case nephrostomy is indicated, this operation to be followed by early secondary nephrectomy.

In chronic pyelonephritis we should endeavor to treat and suppress, if possible, the causal lesion (cystitis, urethral stricture, vesical tumor, etc.). Vaccinotherapy and serotherapy may be employed concurrently with the customary procedures that have proved their worth, but they must under no circumstances be allowed to supplant these.

Dr. Pousson, professor in the clinic for diseases of the urinary tract at the Faculty of Medicine of Bordeaux, expressed his opinion to the effect that in acute nephritis he preferred to have recourse to nephrostomy rather than nephrectomy. Nephrostomy, he contends, has the advantage of preserving the affected kidney during the period that the condition of the other kidney is unknown, and fulfils perfectly the three indications for treatment of all infected organs—adequate bleeding, antiseptic drainage and lavage. As for the treatment of ureteropyelonephritis, Pousson thinks that the choice of method of treatment is, after all, a question that is determined largely by the location of the lesions. If these occupy only the inferior segment of the ureter, lavage and ureteral catheterization are sufficient. If, however, the lesions extend the whole length of the ureter and invade the renal pelvis and the calyces, antiseptic ureteral lavage may suffice, provided there are no diverticula or tortuosities, in which case nephrectomy must be resorted to. The same thing is true if there is renal suppuration or if the abscesses are disseminated through the parenchyma.

Dr. Kidd of London stated that since 1911 he has been treating nontuberculous pyelonephritis by lavage of the renal pelvis, ordinarily. He injects into the pelvis 4 c.c. of a 5 per cent. colloidal silver solution and repeats this injection only twice (three injections in all). In forty-five cases of old pyelonephritis with retention of from 5 to 40 c.c. he has given lavage 121 times without anesthesia, a complete cure resulting in thirty-six cases.

Antisyphilitic Treatment of Rebellious Incontinence of Urine

Dr. André Boeckel of Strasbourg related the case of a soldier who had suffered for a year and a half from incontinence of the urine that had proved rebellious to all forms of treatment instituted in various urologic centers. Boeckel decided to take the Wassermann reaction, which proved to be positive. He accordingly prescribed antisyphilitic treatment, and at the end of eighteen days the patient was completely cured of his weakness. It was apparently an early manifestation of tabes.

Death of Dr. Robert Wurtz

The death of Dr. Robert Wurtz (physician of the Hôpitaux de Paris and agrégé professor on the Faculty of Medicine of Paris) has been reported. He was known mainly as a hygienist. He had published works on hygiene as pertaining to our colonies, on exotic diseases, on industrial poisoning, etc. He occupied the office of director general of the Institut supérieur de vaccine à l'Academie de médecine. Robert Wurtz was the son of the famous chemist, Adolphe Wurtz.

Visit of Spanish Physicians

A mission composed of forty Spanish physicians, organized and conducted by Dr. José de Bleizegui, director of the *España médica*, has arrived in Paris. The reeducation center at Saint-Maurice, the Pasteur Institute, the War Museum and various hospital services will be visited.

Personal

At one of its recent meetings the Academy of Medicine elected three correspondents (in national matters) for the fourth section (therapeutics and natural history as pertaining to medicine). Those chosen were: Dr. Sigalas, professor of pharmaceutical physics on the Faculty of Medicine of Lille; Dr. Guiart, professor of parasitology, and natural history as pertaining to medicine, on the Faculty of Medicine of Lyons.

Dr. Micheleau, agrégé on the Faculty of Medicine of Bordeaux, has been appointed professor of legal medicine on the Faculty of Medicine of Algiers.

The Use of Saccharin

With the purpose in view of guarding against the threatened sugar famine during the war, the government in 1917 passed a law authorizing the use of saccharin in the preparation of certain products of consumption, especially certain beverages (THE JOURNAL, May 12, 1917, p. 1422). It was expressly stipulated that this special privilege should end with the issuing of the proclamation declaring the cessation of hostilities, but, since the reasons for the granting of the privilege still persist at the present time, the government has recently introduced a bill providing for an extension of time.

Hygienic Exhibit Organized by the Rockefeller Mission

A hygienic exhibit organized by the Rockefeller mission has been installed in one of the town halls (*mairies*) of Paris. It aims to educate the people by means of pictures. Banners with colored figures and inscriptions develop a series of hygienic maxims, for example: "Your child has only two eyes; they must serve him his whole life through"; "the health of your wife and your children depends on you; help them to keep it"; "the intelligent employer provides ventilation and healthful surroundings in his workshops," etc. The pictures serve to show how these results can be attained. A collection of postal cards for the children affords them a great deal of amusement. On one card is represented a child

sneezing, while another nearby calls out to him "Keep your microbes for yourself, old boy." On another card is seen a group of children scarcely out of their swaddling clothes starting off to war, brandishing banners on which are printed their peremptory hygienic demands.

The Next Congress of French Orthopedists

The Société française d'orthopédie has fixed the date of its next congress, Oct. 8, 1920, and has put the following questions on the order of the day: (1) modern treatment of scoliosis. Essayist, Dr. Estor, professor of clinical pediatrics and orthopedic surgery on the Faculty of Medicine of Montpellier; (2) traumatic retraction of tendons (Volkmann's disease). Essayist, Dr. Denucé, surgeon of the Hôpitaux de Bordeaux and agrégé professor on the Faculty of Medicine, and (3) anastomosis of tendons in traumatic paralysis. Essayist, Dr. Mauclaire, surgeon of the Hôpitaux de Paris and agrégé professor on the Faculty of Medicine.

RIO DE JANEIRO

Oct. 20, 1919.

Federal Ministry of Public Health

President Pessoa recently communicated to the house his desire to create a federal ministry of public health. The bill presented to congress advises the taking over by the new ministry of all departments dealing with health matters, public sanitation, water supply and sewerage. In this way the secretaries of the interior and of public works will be relieved of excessive work.

Hospital for Mental Diseases

The secretary of the interior visited the asylum for mental and nervous diseases and found it overcrowded, there being 1,460 patients, although only 800 can be housed comfortably; he therefore resolved to found a colony for these unfortunates in one of the suburbs of Rio, and also to have an asylum built for criminal lunatics, both to have all modern improvements.

Influenza Number of the Archivos Brasileiros de Medicina

A special number of the *Archivos Brasileiros de Medicina* has been devoted to influenza. The articles of Prof. Juliano Moreira on psychical disturbances determined by influenza and on influenza in the lunatic asylum during last November and its influence on mental diseases are worthy of special notice. Dr. Moreira's opinion is that the mental disturbances he noted, most or them benign were due to the influenza virus or its toxin. Among other manifestations, the grip provoked meningitis, pseudomeningitis and encephalitis. No case of paralytic dementia resulting from influenza was observed, although latent cases manifested themselves following influenza. Sixty per cent. of influenza psychoses resulted in recovery. Out of 1,470 patients of the asylum, 1,314 were stricken with the disease during the second half of October, and ninety-two, or 6.3 per cent., succumbed. During the same period, 160 new patients suffering with mental diseases due to the pandemic were interned, and in the first days of November, 114. Dr. Moreira did not observe any instance of remission in cases of paralytic dementia; on the contrary, he observed the exacerbation of the symptoms of patients suffering with diffuse latent meningoencephalitis. Besides other interesting articles, Dr. Waldemar de Almeida publishes a complete bibliography of Brazilian publications on influenza. (See also page 1479.)

The New Director of Public Health

Dr. Carlos Chagas of the Instituto Oswaldo Cruz has superseded Dr. Theophilo Torres as director of public health. Dr. Torres did valiant service during the epidemic of influenza in 1918, and appointed commissions to visit the different states to extinguish foci of yellow fever. Dr. Chagas will continue as director of the Oswaldo Cruz Institute.

Memoirs of the Instituto de Butantan

The S. Paulo Instituto de Butantan for medical research has initiated the publication of a new scientific journal. The first number contains articles on utricularia of Rio de Janeiro and its neighborhood, by F. C. Hoehne and J. G. Kuhlmann; a histologic study of the gland of Brazilian snake heads, by Dorival C. Penteado; antiscorpionic serum, by Dr. Vital Brasil, and a contribution to the knowledge of Brazilian snakes, by Dr. J. Florencio Gomes.

The second number treats of Bancroft filariasis; the classification of *Hemosporidia;* a contribution to the parasitic mycology of Brazil, and a contribution to the treatment of the atonic and phagedenic ulcers. Dr. Afranio do Amaral, the author of the first paper, calls attention to the histologic characters of filariasis, which may serve as a basis for the diagnosis: inconsistency of globular alterations; reduction of the polymorphonuclear neutrophil leukocytes with increase of the microlymphocytes during the night, and constant increases of the eosinophils, more accentuated during the apyretic periods; absence of globular alterations; absolute increase of the leukocytes; increase of the polymorphonuclear neutrophil leukocytes with reduction of the microlymphocytes, and diminution or absence of the eosinophils, which return before the paroxysm has passed. In the second paper, Henrique Aragão, using as a basis not only morphologic characters of the different hematozoa but particularly the knowledge which is possessed respecting their evolutionary cycle, proposes a new systematic grouping for the suborder of *Hemocytozoa*, dividing it into the four superfamilies: *Haemogregarinoidea, Achromaticoidea,* new superf., *Plasmodoidea,* new superf., and *Toxoplasmoidea,* new superf.

The first one is divided into families, *Hemogregarinidae,* with the genera *Haemogregarina, Lankesterella, Karyolysas* and *Hepatozoon.* The second one includes two families, *Achromaticidae,* with the genera *Achromaticus, Smithia, Elleipsisoma, Rosiella* and *Rangiella,* and *Theileridae,* n. f., with the genus *Theileria.* The third one is subdivided into two families, *Haemoproteidae* with the genus *Haemoproteus,* and *Plasmodidae,* with the genera *Plasmodium* and *Haemocystidium* and the subgenus *Laverania.* The fourth includes one family only, *Toxoplasmidae,* and the only genus, *Toxoplasma.*

In the third article, Prof. Pirajá da Silva relates two interesting cases of Madura foot observed in Bahia. In the first case he isolated *Discomyces,* which he considers a new species and calls *bahiensis;* in the second one he isolated *Madurella ramiroi,* n. sp.

In the fourth paper, Dr. Afranio do Amaral describes the treatment of atonic ulcers and phagedenic ulcers by means of local applications of normal dried serum, without the concomitant use of any antiseptic substance. On the first application of the serum, the ulcers begin to change in appearance, becoming clean and regular, and the tissues recover their activity. The sore heals rapidly and completely. In cases of phagedenic ulcers, a complete destruction of the fusospirochete association is observed.

Consanguineous Marriages

There is a bill pending in congress to repeal an article of the civil law code prohibiting consanguineous marriages which have not received the approval of the profession.

LONDON

Nov. 13, 1919.

Death of the Middle Classes

Under this title the *Times* emphasizes what is perhaps the most important result of the declining birth rate. The most recent report on this subject, that of the health officer for Chester, states that in 1918 there were 132 fewer births in Cheshire than in 1917. The rate for the county is now 15.9 per thousand of estimated population. That for England and Wales is 17.7, and for London, 16.1. Comparing these figures with the birth rate for the decennium 1901-1910 shows that the latter was 27.2. Going further back, the subjoined table may be constructed:

BIRTH RATE PER THOUSAND LIVING AT ALL AGES

1851-1860	1861-1870	1871-1880	1881-1890	1891-1900	1901-1910	1918
34.1	35.2	35.4	32.4	29.9	27.2	17.7

In the same period (1851-1910) it is true that the death rate fell by 30 per cent. A large proportion of the fall is to be ascribed to the reduction of the infant death rate and to measures of public hygiene. The result has been that the falling birth rate has been to some extent compensated for by the falling death rate among the working and industrial classes, in which the annual gain and loss were very high thirty years ago. But that is not true of the middle classes. Their birth rate is falling rapidly; their death rate, never very high, is not falling. Thus the middle classes are sinking in the matter of population. We are witnessing what can be described without exaggeration as the death of the middle classes. Especially during the past three years, middle class births have been rapidly diminishing. The

family of four or five has become the family of two or three and is in process of becoming the family of one. A great number of young couples now openly declare that they do not intend to have more than one child, and many decide to have no children at all. Every physician is able to corroborate these facts, and many physicians are consulted on the question of birth prevention. With the present cost of living, taxation, and the price of houses, a "family," as that term used to be understood, is impossible. It means not discomfort but privation. It is therefore felt to be better to bring up one healthy child and afford it a reasonable education than to attempt to bring up three children on insufficient food and without being able to afford them a training for their life's work. But the mischief does not stop there. The marriage rate has also fallen. In 1917 it was 13.8 per thousand of the population at all ages. This rate was the lowest to that time recorded, being 1.1 below that of 1916 and 2.6 below the average rate of the quinquennium 1911-1915. Early in the war (which, as explained in previous letters, was at first an incentive to marriage), 1915, a maximum was reached at 19.4 per thousand. Marriages, and especially middle class marriages, are being postponed at present on account of housing and food difficulties, and there can be no doubt that many men are avoiding marriage altogether because of the severe financial strain which it imposes. The world is in a gay mood, and the attractions of domestic life on a salary barely enough for two are not conspicuous. As a bachelor, a man may indulge in his tastes, preserve his freedom of action, and can afford to amuse himself with his friends. He shrinks from the alternative of stern, hard work, frugal living, a minimum of pleasure as that word is understood in our cities, and a maximum of anxiety. Moreover, the age question has to be considered. The proportion of bachelors marrying during 1911-1914 was about 39 per cent. In 1886-1890 it was 50 per cent. It was 37.6 in 1917. The proportion of bachelors marrying at ages over 35 has also increased notably during 1916 and 1917. Of spinsters marrying during the later eighties, about 63 per cent. were under 25 years of age; of these marrying during the last few years, only 55 per cent. were under 25. The war, of course, has proved a disturbing factor in all statistics; but it is not to be doubted that among the middle classes, marriages are becoming not only fewer in number but also later in respect of the age of the contracting parties.

The Lancet on Its Defense

A correspondent has asked the *Lancet* whether all the present staff consists of bacteriologists. Our contemporary says that the answer is in the negative; but the implied criticism of the contents of recent issues is justifiable, and deserves as satisfactory a rejoinder as it can supply. For many years there has been a progressive increase in the space allotted to bacteriology in its wider sense. The volumes from 1880 to 1900 show that while the balance was then held, as well as could be, between the various systems of the body, disease was discussed almost exclusively from the clinical standpoint. If the balance has shifted, it is due to the alteration in comparative values of what has to be said in a medical journal, desiring to deal alike with the art and the science of medicine. The clinical and therapeutic aspect must always remain the most urgently important. Readers whose interests are necessarily centered round the personal element in medical practice may tire of articles dealing with the life history and evil habits of the minute enemies of human existence. Instead of finding new methods crisp and practical, whereby the bodily ailments of actual men and women may be more expeditiously diagnosed and cured, the physician encounters contradictory theories and a host of apparently irrelevant detail with no application to daily medical practice. The *Lancet* claims to endeavor to do justice to both sides, and to show by its pages their interrelations.

The *Lancet* takes as an example a circular on prophylactic injection against influenza, recently addressed to the parents of all the students in one of the leading women's colleges by the principal. This is advocated by the college physician on the ground that, even should inoculated persons not be rendered entirely immune, yet the attacks will be milder and rarely followed by pneumonia. As a consequence of this letter, hundreds of physicians will be asked to give a decision on the subject which will be subject to intelligent criticism. They may be questioned on the probability of Pfeiffer's bacillus being the cause of influenza as against a filtrable virus, and to estimate the utility of a vaccine for a disease the cause of which is unknown. The assertion that pneumonia is less liable to follow influenza in inoculated persons may have to be examined in the light of its bacterial causation and the composition of the vaccine to be used. The problems arising out of this letter therefore suggest that, in opening its columns generously to bacteriology, the *Lancet* is acting with appreciation of the needs of those not specially interested in the subject. It agrees, however, with its correspondent that communications have appeared in its columns that would have been, as it happens, more suitable for a purely technical publication. But it adds that it is not easy to foresee when any piece of work may not become of real clinical importance.

The Welfare of the Blind

A committee on the welfare of the blind, appointed by the government, has issued its report. The deficiency of the census of 1911 in the enumeration of the blind has been met by an inquiry through public bodies. A register formed on the replies shows a total of 25,840 blind persons in England and Wales. It is thought that, when omissions are made up, the total will be 30,000. Inquiry was made into the work of the blind, and it was found that the unemployable group (11,895) is the largest, being 46 per cent. of the total enumerated. This class represents the real crux of the problem of dealing with the blind. Of blind persons in occupations, the largest proportion are engaged in basket and cane work; there are relatively few in outdoor occupations. A large number of blind children are not attending school, and of these, 40.6 per cent. were returned as mentally defective. A table of the age of onset of blindness shows that 21.4 per cent. were blinded within the first year of life, the majority of them within the first few months. After the first year the incidence is, roughly, 10 per cent. for each decad up to 70 years. The inquiry did not elicit useful information as to the causes of blindness so far as disease was concerned, owing to the absence of medical opinion. But accidents were found to account for 12.3 per cent. of the total. It is believed that a considerable proportion of these cases of blindness would be prevented if better protection by goggles and the like were provided in certain industries. An analysis of 6,000 returns of eye accidents showed that 51 per cent. were due to chips of metal or grit striking the eye. Trade union wages do not allow the slow-working blind to gain a living; a scheme for the augmentation of wages has been framed which, it is believed, will provide an incentive to work and offer no inducement to malingering. During the war there has been ample work for the blind, and measures are to be taken to secure a sufficient diversion of work to keep them employed in normal times.

The Red Cross to Help Combat Tuberculosis

It has been decided that the British Red Cross, now relieved from its gigantic labors during the war, shall direct its activities against tuberculosis. At the conference of the national association for the prevention of tuberculosis, Sir Arthur Stanley, chairman of the British Red Cross, said that tuberculosis offered a field in which the society might be of the greatest assistance. It was hoped to form an organization by means of which every man, woman and child in the country might receive just that amount of skilled attention which is necessary in the early stages of any accident or disease, and so work on to the further stage when trained assistance could be given in the great hospitals of the country. The Red Cross had a very large army of motor ambulances in France and elsewhere which might be used for the benefit of civilians as they were for the benefit of soldiers. The whole country would be mapped out in such a way that no town or village should be more than 15 miles from an ambulance station. There was also scope for the cooperation of voluntary workers with the trained nurses in districts. More than half the time of district nurses in villages and other centers was taken up in work that might just as well be done by other people. It was therefore proposed to link up the ambulance system with another system under which, in every village and small town, the trained nurses would cooperate with the voluntary workers in such a way that the latter might be able to attend to the minor accidents and the initial stages of disease in their respective districts. The voluntary workers would be connected with a nursing center which should be in every considerable county town, together with a well equipped and well staffed hospital.

Broadly speaking, the whole matter resolved itself into three stages: In the first stage, the early period of the disease, the voluntary workers could be of practical assistance. In the second stage, when the disease was well established and sanatorium treatment was probably required, the matter should be left to the state. No organization, however big, could meet the cost of the management of

sanatoriums. The third stage related to cases which had gone practically beyond help—the stage in which the sufferer naturally pined to get back to his own home at the time when it was the very thing that he should not do. In that stage such organizations could do good work by insuring for the sufferers the provision of homes so situated that they were easily available to the sufferer's family and friends, where he could be frequently visited and where he would be surrounded by homelike conditions, such as no state institution could insure.

Flies as Carriers of Dysentery

A report on bacillary dysentery in Macedonia, just presented to the Medical Research Committee, tends to show that flies carry the disease. The report is based on careful experiments, which were carried out by Capt. J. F. Taylor, under three heads: (1) a comparison of the number of flies present at different seasons in a certain area with the proportional incidence of bacillary dysentery arising in that area; (2) experiments to show that a fly, when deliberately infected with a bacillus of the dysentery group, is able to carry that bacillus and to infect suitable mediums with it, and (3) experiments to show that flies in their natural state were carrying dysentery bacilli. The first line of research resulted in a remarkable graph showing that in April, May and June, when the fly prevalence was at its height, the dysentery prevalence rose also to a height. This occurred again in September and October, both fly and dysentery prevalence rising steeply. The experiments proved that the insect can become the vehicle of both Flexner and Shiga bacilli. The flies were caught in sterile dishes and put into specially constructed cages. Food was passed in to them in a watch glass. It was found that they tended to die unless the atmosphere was kept moist. The food consisted of milk cultures of dysentery bacilli (Flexner and Shiga), or other material known to contain these organisms. The flies so fed were examined in various ways. Some were allowed to walk over the culture plate, others were killed and their legs alone used, and in some excreta were examined. A total of 382 flies were examined, and of these seventy-nine gave positive results. It is concluded that the fly is capable of carrying both types of dysentery bacilli and that the prospect of recovering the infecting organism from the fly diminishes very markedly after twenty-four hours from the time of infection. The latter point is new. Finally, it was found that flies living under natural conditions were carrying dysentery bacilli. These flies were caught in various parts of the hospitals, wards, kitchens and latrines. These experiments have great value at a moment when bacillary dysentery carriers are known to be present in this country. They suggest, too, that the assertion often made that infantile diarrhea is a fly-borne disease may be well founded.

Indians in the Indian Medical Service

The Indian Medical Service has for many years contained a large number of Indians in its lower grades who have worked very well under British officers. The government is now bringing in a bill which will transfer a good deal of power to Indian representative bodies and possibly alter the predominant position of British officials in India. Important evidence has been given before a select committee on the government of India bill by Col. R. H. Elliot, who was a member of the Indian Medical Service for fifteen years and superintendent of the Madras Hospital. He said that Europeans do not like serving under Indians. They do not feel that they would receive the same support and make the same progress as under British superiors. Handing over the medical service to Indians would not have a good effect on the public health. It is not a racial question. There are many Indians under whom Europeans would be glad to serve, but they would not be willing to serve under the majority of Indians. Asked if in his opinion Indians should be excluded from the Indian Medical Service, he said he would rather not make any comment on that point, as it was too difficult. In his opinion the Indian people as a mass take no notice of or interest in sanitation. If the British interfered with water supplies such as wells and tried to bring sanitation about, they would provoke a great deal of ill feeling. At the present time to substitute Indian medical officers for British would be setting back the clock and stop the progress now being made. He agreed that a gradual substitution was quite a different matter, and this would no doubt come eventually He himself had the greatest sympathy with the Indians Their physicians had done really splendid work, and he looked forward with confidence to their doing still much better and more work in the future.

Marriages

AARON LEIDY RUTH, Conshohocken, Pa., to Miss Jean Hodgort of Paisley, Scotland, in New York City, October 1.

FRED ANDREW JOHNSON to Miss Reba Milburn Roulf, both of Greenville, Mich., at Grand Rapids, Mich., November 13.

SAMUEL JONES BAMPFIELD, Omar, W. Va., to Miss Ethel Blanche Spriggs of Institute, W. Va., November 19.

SAMUEL I. YARNELL, Chattanooga, Tenn., to Miss Nancy Myra Leeper of Lenoir City, Tenn., November 5.

AMOS REGINALD SHIRLEY, New York City, to Miss Harriet Pauline Eastin of Chattanooga, Tenn., October 25.

JOHN LESTER WEBB, Carbon Hill, Ohio, to Miss Dorothy Sweazy of Columbus, Ohio, October 29.

CLARENCE BANCROFT INGRAHAM, JR., to Mrs. Agnes Revi, both of Denver, recently.

AUSTIN MILLARD GROVE to Miss Maude M. Petry, both of York, Pa., September 30.

REA PARKER, Smithfield, Va., to Miss Leslie Nalle of Culpeper, Va., November 19.

Deaths

James Dudley Morgan ✙ **Asst. Surg., Lieut. (j. g.), U. S. Navy,** Washington, D. C.; Georgetown University, Washington, D. C., 1885; aged 57; demonstrator of anatomy from 1888 to 1899 and lecturer on differential diagnosis from 1897 to 1898 in his alma mater; associate and clinical professor of medicine in George Washington University, Washington, D. C., from 1910 to 1917; physician to Garfield Hospital since 1899 and chief of the medical service of Emergency Hospital since 1904; a member of the American Climatological Association; president of the Medical Society of the District of Columbia in 1906; president of the Columbia Historical Society from 1909 to 1916; died at his summer home, Chevy Chase, Md., November 21.

Xavier Oswald Werder ✙ Pittsburgh; University of the City of New York, 1879; aged 61; professor of gynecology in the Western Pennsylvania Medical College and University of Pittsburgh; since 1889 a member of the American Association of Obstetricians and Gynecologists; treasurer of the association for eight years and its president in 1914; gynecologist to Mercy and Charity Hospital; consulting gynecologist to St. Francis, Allegheny General and Southside hospitals, Pittsburgh; an extensive contributor to the literature of gynecology; died, November 20.

David Henry Dougan, Richmond, Ind.; Bellevue Hospital Medical College, 1874; aged 74; formerly president of the Denver Medical Society and a member of the Colorado State Board of Health, and surgeon-general of the National Guard of Colorado, with the rank of colonel; for one term mayor of Leadville, and president of the Carbonate National Bank, Leadville in 1891, and for twenty years president of the Commercial National Bank, Denver; died, October 31, from carcinoma.

Thomas F. Foncannon, Emporia, Kan.; Louisville (Ky.) Medical College, 1879; aged 63; a local surgeon to the Missouri, Kansas and Texas Railroad; formerly president of the Emporia Board of Health, and member of the Kansas Medical Society; once first vice president of the Kansas Medical Society, and president of the Lynn County Medical Society; one of the founders of St. Mary's Hospital, Emporia; died, November 20.

Isaac Lafayette Watkins ✙ Montgomery, Ala.; Bellevue Hospital Medical College, 1878; aged 65; president of the Medical Association of the State of Alabama, and once president of the Montgomery County Medical Society; founder and physician to Highland Park Sanatorium, Montgomery; a member of the Southern Surgical and Gynecological Association; died, November 18.

Douglas Luce, Tracy, Calif.; Starling Medical College, Columbus, Ohio, 1854; aged 89; a member of the Medical Society of the State of California; local surgeon to the Southern Pacific system until his retirement in 1905; assistant surgeon of the Forty-Fourth Ohio Volunteer Infantry during the Civil War; died in the Veterans' Home, Napa County, November 4.

✙ Indicates "Fellow" of the American Medical Association.

Joseph Harry Collins ✠ Pittsburgh; Georgetown University, Washington, D. C., 1906; aged 36; assistant secretary of the Allegheny County Medical Society; a specialist in surgery; major, M.C., U. S. Army, and honorably discharged, June 24, 1919; died in the Union Protestant Infirmary, Baltimore, November 11, from strangulation of bowel after a gastro-enterostomy for duodenal ulcer after a surgical operation.

John Myers Swan, Canton, China; University of the City of New York, 1885; aged 59; for twenty-nine years a medical missionary under the Presbyterian Board of Foreign Missions, for the last five years owner and operator of the Hillcrest Hospital, Canton; was struck by an automobile truck in Pittsburgh, November 11, fracturing his skull, and died two hours later in the West Penn Hospital.

George Andrew Hettler, Toledo, Ohio; University of Cincinnati, 1916; aged 34; formerly surgeon of the Third Infantry, Ohio National Guard; later major, M. C., U. S. Army, and on duty overseas with the 147th U. S. Infantry; awarded the Distinguished Service Medal, and honorably discharged, August 3; died, November 15, from scarlet fever.

Edwin John Carpenter, Corning, N. Y.; University of Buffalo, 1891; aged 55; for many years a member of the board of education, and at one time president; once an alderman and for two terms coroner of Steuben County; a member of the medical staff of the Corning Hospital; died, November 14, from cerebral embolism.

John Ross ✠ Pontiac, Ill.; Rush Medical College, 1894; aged 52; for twenty years and until the time of his death, secretary of the Livingston County Medical Society; died in St. James Hospital, Pontiac, November 18, from injuries sustained by being struck by a train, while driving in his automobile across the railway tracks.

Arminius F. Bock, St. Louis; University of Würzburg, Germany, 1868; aged 73; a member of the Missouri State Medical Association, and a practitioner of St. Louis for half a century; one of the founders and first surgeon on the staff of the Deaconess Hospital; died, November 14, from heart disease.

Henry Larned Sidebotham, Philadelphia; Jefferson Medical College, 1886; aged 54; for two terms coroner's physician, and later resident physician at the Norristown State Hospital; medical inspector of the bureau of health; died in St. Mary's Hospital, November 16, from cerebral hemorrhage.

William Hiller Richardson, Vernon, Ind.; Medical College of Ohio, Cincinnati, 1875; Bellevue Hospital Medical College, 1878; aged 66; a member of the Indiana State Medical Association; president of the Jennings County (Ind.) Medical Society in 1917; died, November 3, from angina pectoris.

Hamilton P. Franks, Muncie, Ind.; Medical College of Indiana, Indianapolis, 1882; University of the City of New York, 1888; aged 70; a member of the Indiana State Medical Association, and formerly president of the Delaware County Medical Association; died, November 13.

James K. Graham, St. Joseph, Mo.; College of Physicians and Surgeons of St. Joseph, Mo., 1882; aged 60; a member of the Missouri State Medical Association; for two terms county physician of Buchanan County, and from 1898 to 1900 city physician of St. Joseph; died, November 10.

Ernest J. C. Sward, Lincoln, Neb.; University of Nebraska, Omaha, 1896; aged 46; elected secretary of the Nebraska State Board of Health in 1907; once president of the Burke County Medical Association, and coroner of Burke County; died in Excelsior Springs, Mo., November 19.

James Marshall Jamison, Bowling Green, Ky.; University of Tennessee, Nashville, 1870; aged 71; for several years physician at the Tennessee State Penitentiary, Nashville, but since 1885 in the insurance business; died in St. Joseph's Hospital, Bowling Green, November 18.

Leon Thompson Burgess, Chicago; Jenner Medical College, Chicago, 1907; aged 46; whose license was revoked, Feb 7, 1918, by the Department of Registration for violation of the medical practice act; died, November 15, from pneumonia following an automobile accident

Herbert Leonard Strong, Portland, Ore.; University of Oregon, Portland, 1918; aged 30; lieutenant (junior grade), U. S. N. R. F., on duty at the U. S. Naval Hospital, Mare Island, Calif., and relieved from active duty, August 27; died in the hospital, October 21.

Albert Lee McGough, Detroit; Detroit College of Medicine and Surgery, 1894; aged 49; a member of the Michigan State Medical Society, and a member of the staff of the Harper Hospital; died in that institution, November 16, from heart disease.

Sylvan Graham Bushey, Camden, N. J.; Jefferson Medical College, 1891; aged 53; a member of the Medical Society of New Jersey; for twenty-four years a member of the board of health of Camden; died, November 16, from cerebral hemorrhage.

Alfred Alexander Tyrrell, Spokane, Wash.; Milwaukee Medical College, 1910; aged 32; first lieutenant, M. R. C., U. S. Army, and honorably discharged, Dec. 6, 1918; intern at St. Luke's Hospital, Spokane; died in that institution, August 15.

Cyrus Clay Reichard, Brownsville, Pa.; Northwestern University Medical School, Chicago, 1870; aged 75; a veteran of the Civil War; formerly president of the board of health of Brownsville; died in his office, November 17, from heart disease.

Frank Richard Curney, Dumas, Texas; University of Illinois, Chicago, 1904; aged 44; on duty in Panama and afterward in the Coast Survey at Manila; was killed, November 19, in a collision between automobiles, near Dumas.

Elisha Green Hale, Nashville, Ark. (license, Eclectic State Medical Board of Arkansas, 1903); aged 86; a veteran of the Civil War; for thirty years a practitioner, and since 1885 a druggist; died, November 16, from chronic cystitis.

Walter Peyre Porcher, Charleston, S. C.; Medical College of South Carolina, Charleston, 1891; aged 61; a member of the South Carolina Medical Association; professor of rhinology and laryngology in his alma mater; died, November 2.

Richard Leiman, Detroit; Detroit Homeopathic College, 1910; aged 36; a member of the Michigan State Medical Society; while on a hunting expedition, near Parry Sound, Ont., was accidentally shot and killed, November 8.

Albert M. Eaton, Philadelphia; Jefferson Medical College, 1872; aged 69; a member of the Medical Society of the State of Pennsylvania, and once vice president of the Philadelphia County Medical Society; died, November 19.

Hiram Hunt ✠ Greenville, Me.; Bowdoin Medical School, Brunswick and Portland, Me., 1884; aged 58; a member of the consulting staff of the Eastern Maine General Hospital, Bangor; died, November 4.

George Platt Waller, Montgomery, Ala.; University of the City of New York, 1892; aged 64; a member of the Medical Association of the State of Alabama; died at a hospital in Montgomery, November 4.

T. J. McCord, Galena, Mo.; Kansas City, Mo.; Hospital College of Medicine, 1885; aged 77; for four years a surgeon of United States Volunteers during the Civil War; died, November 18.

Alpheus B. Stroud, Henderson, Texas; New Orleans School of Medicine, 1861; aged 80; a Confederate veteran; died at the home of his daughter in Mooringsport, La., November 5.

William F. Maggard, Corning, Calif.; College of Physicians and Surgeons, Keokuk, Iowa, 1879; aged 64; a member of the Medical Society of the State of California; died, October 21.

Ebenezer Farrington Spaulding, Boston; Harvard University Medical School, 1866; aged 84; from 1862 to 1865 surgeon of the Seventh Wisconsin Volunteer Infantry; died, recently.

Charles Lethbridge Stowe, Hilo, Hawaii; M.R.C.S. (Eng.), 1882; L.R.C.P. (Edin.), 1883; aged 62; a member of the Medical Society of Hawaii; died, July 6, from acute myocarditis.

John Joseph Hayes, Boston (license, Massachusetts, years of practice, 1894); aged 68; at one time superintendent of the Dedham County Jail and House of Correction; died, November 18.

William Hamilton Crockford, Jr., Petersburg, Va.; University of Virginia, Charlottesville, 1902; aged 41; for several years coroner of Dinwiddie County; died, November 2.

Junius Wooten, Smith's Grove, Ky.; University of Louisville, Ky., 1868; aged 73; a member of the Kentucky State Medical Association; died, November 19, from nephritis.

Thomas L. Eads, Michigan City, Ind. (license, Indiana, 1897); aged 69; a practitioner since 1890; died, September 20, from septicemia following an infection of the hand.

Gurley Curtis McCoy ✦ St. Louis; Washington University, St. Louis, 1908; aged 35; who had devoted his attention especially to surgery; died, November 10, from nephritis.

George S. Wilkins, Brighton, Iowa; State University of Iowa, Iowa City, 1875; aged 66; died in the Jefferson County Hospital, Fairfield, Iowa, October 19, from nephritis.

J. Alston Scott, Monticello, S. C.; Medical College of the State of South Carolina, 1875; aged 66; died in the Columbia (S. C.) Hospital, November, 3, from heart disease.

James L. Nelles, Canton, Ill.; McGill University, Montreal, 1875; aged 68; a member of the Illinois State Medical Society; died, November 20, from heart disease.

Richard W. Lease, Redfield, Kan.; College of Physicians and Surgeons, Keokuk, Iowa, 1878; aged 68; a member of the Kansas Medical Society; died, November 9.

Robert S. Hirsch, Seward, Neb. (license, Nebraska, 1891); aged 71; an eclectic practitioner; also a pharmacist; for one term coroner of York County; died, October 29.

John Lawrence Jordan, Bennettsville, S. C.; University of the City of New York, 1868; aged 73; a Confederate veteran; died in a hospital in Richmond, November 15.

J. C. Pickering, San Francisco; Eclectic Medical College, San Francisco, 1893; aged 56; died in St. Joseph's Hospital, San Francisco, November 18, from dysentery.

William W. Pearce, Waukegan, Ill.; University of Illinois, Chicago, 1885; aged 61; for four terms mayor of Waukegan; died, October 16, from carcinoma of the jaw.

Marcellus R. Jamison, Greensburg, Pa.; Pulte Medical College, Cincinnati, 1881; aged 67; died in the Westmoreland Hospital, Greensburg, November 15.

Albert Guy Howard, Farmington, Me.; University of Vermont, Burlington, 1881; aged 72; a member of the Maine Medical Association; died, September 6.

Wesley Kinney Bradner, Bradley Beach, N. J.; Bellevue Hospital Medical College, 1876; aged 67; health officer of Bradley Beach; died, November 20.

George Adams Barker, Menomonie, Wis.; Bowdoin Medical School, Brunswick and Portland, Me., 1884; aged 64; died, November 16, from heart disease.

William U. Martin, Richmond, Ky.; University of Louisville, Ky., 1862; aged 86; a Confederate veteran; died, November 16, from carcinoma.

Bernard Mellen, Cleveland (license, Ohio, 1896); aged 69; a practitioner for thirty-five years; died, November 13, from cerebral hemorrhage.

George C. Knight, Barksdale, S. C.; Atlanta (Ga.) College of Physicians and Surgeons, 1900; aged 40; died, October 27, from nephrolithiasis.

Andrew Nickell Herring, Deraff, Ohio; Eclectic Medical Institute, Cincinnati, 1895; aged 56; died, November 17, from heart disease.

Irvin C. Conn, Oakwood, Ga.; Maryland Medical College, Baltimore, 1904; aged 44; died, recently, from cerebral hemorrhage.

David Crary, Jr. ✦ Hartford, Conn.; Yale University, New Haven, 1869; aged 77; died, July 9, from chronic interstitial nephritis.

John F. Kent, Newburg, Ark. (license, Eclectic Board of Arkansas, 1903); aged 48; died, November 3, from gastroenteritis.

George W. Bradford, Grandview, Mo.; Medico-Chirurgical College of Kansas City, Mo., 1900; aged 57; died, November 5.

Herman Frumson, St. Louis; Washington University, St. Louis, 1889; aged 66; died, October 31, from heart disease.

Samuel N. Kelley, Bellingham, Wash.; Hospital College of Medicine, Louisville, 1886; aged 56; died, November 15.

William Parrish Camp, Springfield, Mo.; Missouri Medical College, St. Louis, 1876; aged 78; died, November 9.

Francis Charles Murphy ✦ Boston; Harvard University Medical School, 1886; aged 53; died, November 16.

William Huff, Cove Creek, Ark.; University of Virginia, Charlottesville, 1868; aged 75; died, November 6.

Hiram W. Nye, Enon Valley, Pa.; University of Wooster, Cleveland, 1866; aged 76; died, November 19.

John Michael Stephen, Reading, Pa.; Jefferson Medical College, 1887; aged 64; died, November 10.

Daniel Marion Moser, Claremont, N. C. (license, North Carolina, 1896); died, November 9.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

ANTIMERISTEM-SCHMIDT

Some, possibly many of our readers, have received a letter from Cologne, Germany, from the "Bakteriologisch-Chemisches Laboratorium Wolfgang Schmidt." The letter contains a circular directing the attention of American physicians to "Antimeristem-Schmidt." It also contains some advertising leaflets. One physician in sending in this material to THE JOURNAL writes:

"A copy of the enclosed circulars has been sent to many of the physicians in this city, and probably elsewhere. Perhaps it has already been called to your attention. Let us be as liberal as possible with our recent enemies. The sooner the old channels of scientific communication are re-opened, the better. But let us not allow such blatant commercialism from a foreign country to go unprotested, any more than we should if it were from our own."

It should be noted in passing that the envelop in which the Wolfgang Schmidt letter came has on its face a rubber-stamped impress to the effect: "Concerns Cancer Treatment." The circular letter declares that by means of Antimeristem-Schmidt "either a cure or improvement has been effected in numerous inoperable cases" of malignant tumors. American physicians are asked "to employ the preparation when occasion arises" and are assured that "every medical man in city or country will be able to carry out treatment without preliminary knowledge." With the letter are two leaflets discussing the use and administration of the product; one contained what was called a "Synopsis of some of the more recent publications regarding the employment of Antimeristem-Schmidt in inoperable malignant tumors." The "recent" publications comprised three articles published in 1910 and one published in 1912!

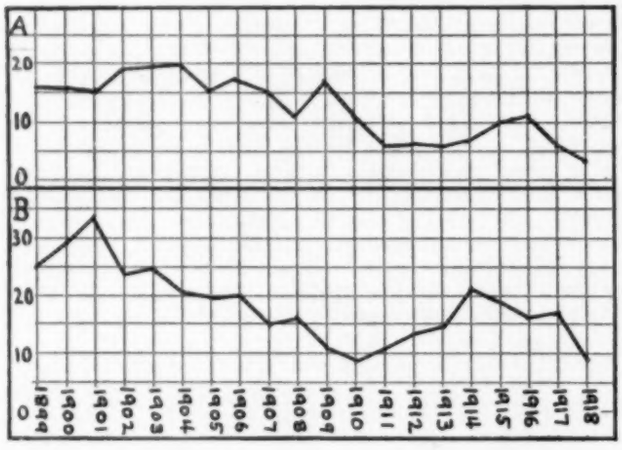
Antimeristem-Schmidt was rather widely exploited some six or seven years ago. As was explained in THE JOURNAL of March 8, 1913, it is a preparation claimed to be useful in the treatment of inoperable cancer and as a supplementary treatment after operations for cancer. The treatment is founded on a theory advanced by one O. Schmidt that the cause of cancer is found in a fungus, *Mucor racemosus*, which, Schmidt at first asserted, carried a protozoon which he regarded as the real cause of the disease. The vaccine is said to be prepared from cultures from this fungus. While Schmidt claims that he has been able to produce cancer by means of the organism, scientific research has not verified his claims. Extensive clinical trials have shown the treatment to be without effect. THE JOURNAL also advised its readers on April 19, 1913, that no license for the sale of Antimeristem-Schmidt had been granted by the Treasury Department and, therefore, its importation into this country was prohibited. Neither the therapeutic nor the legal status of the product has been changed since then.

Roentgen Examination of Abdomen.—The last work of the late Adolf Schmidt appeared in the *Deutsche medizinische Wochenschrift*, Feb. 20, 1919, p. 201, where he described the peculiarly instructive roentgen findings in the abdomen when from 1 to 3 liters of oxygen or air had been pumped into the abdominal cavity. He reproduced a number of roentgenograms showing the outlines of viscera thrown into sharp relief by this means. Rautenberg in the same issue reports excellent results from injection of air into the peritoneal cavity. He has been applying this method for five years, and describes twelve typical cases. The gallbladder is rendered visible by it. The findings with these methods are more instructive as the subject twists his trunk and bends over or reclines on different sides.

Correspondence

THE FALLING NECROPSY RATE

To the Editor:—The letter from Dr. Douglas Symmers in The Journal, Sept. 20, 1919, p. 929, is an interesting contribution to the subject of the falling necropsy rate and an excellent illustration of just the point which was made in my address on "The Relation of Pathology to Practice" (The Journal, Aug. 23, 1919, p. 569). I am glad to obtain the support in this matter of so well known a pathologist as Dr. Symmers, and regret that any phrase in my address seemed at all critical of the work of Bellevue Hospital, long known as one of the great institutions in this country. The use of the Bellevue statistics was merely in illustration of how low a good hospital could fall, and the facts were obtained from a letter from Dr. Symmers, in which the percentage of necropsies in 1917 is given as 11, in 1918 as "almost 7." In a more recent letter to me Dr. Symmers says that these figures for 1918 were based on the total number of deaths in the hospital, and that if the medical examiner's cases and the unclaimed dead, which pass out of the control of the hospital, are deducted, the actual percentage of necropsies by consent in 1918 is 10 instead of 7. With the additional figures for 1915 given in Dr. Symmers' letter to The Journal, there is shown a continuous fall in the percentage of necropsies in Bellevue Hospital. The absolute percentages are, of course, unimportant; the main fact is that even in a large city institution the percentage of necropsies has fallen in the last few years. This is equally true of many of the public and private institutions in the United States. I might perfectly well have cited St. Luke's Hospital, with which I am connected, where the necropsy percentage has fallen, as is shown by the accompanying chart. The same is true of the Boston City Hospital, the figures for which I owe to the kindness of Prof. F. B. Mallory.



Percentage of necropsies to deaths: *A*, at the Boston City Hospital from 1899 to 1918, inclusive; *B*, at St. Luke's Hospital, New York, from 1899 to 1918, inclusive.

The chief point, it seems to me, is to determine why this fall has occurred. In my address I pointed out some of the causes; they are very numerous and vary in their activity in different institutions; but the most important one, to my mind, is that of which I spoke—the growing lack of interest in morphologic pathology.

Another factor is the widespread growth of Christian science and similar sects which teach nonmedical treatment. When the relatives of a person dying in the hospital hold these beliefs or are under the influence of osteopaths or chiropractors, a necropsy is, naturally, unobtainable. Another factor which is of special importance in New York is the peculiar wording of the state law permitting necropsies, which enables the relatives of the patient to bring suit for damages. The tendency has been to compromise such suits, rather than to fight them; and in cases in which an adverse decision is rendered, not to carry them to a higher court, where undoubtedly a reversal would be obtained.

Still another factor is the indifference or even active opposition to necropsies on the part of those members of the hospital clerical staff who have to do with the relatives of the deceased. Still another, the opposition of many undertakers who find it less easy to embalm a body after a necropsy has been performed. The pathologist can do but little to improve any of these conditions except the last; if the large vessels are left long so that they can be more easily injected, embalming is facilitated. In most hospitals the pathologist never sees the patient or the family, and thus cannot appeal except through the lay management and the attending staff.

But the outstanding reason for the falling rate of necropsies is, I believe, the lack of interest of the attending physicians and of the interns; the intern is a mirror reflecting the attitude of the attending physician. If the percentage curve of necropsies in a hospital is examined, it will be found to vary with the members of the attending staff. On those services on which teaching is carried on, a higher rate of necropsies usually obtains; when the service changes to a man who is not interested in scientific medicine, the rate falls. The reason why a high percentage of necropsies is obtained at the Mayo Clinic and at the Memorial Hospital is that these institutions make it a business to secure consent.

These are some of the difficulties with which the teacher of pathologic anatomy has to contend, and they may explain why most of our pathologists have had to go to Germany to complete their educations. They will always prevent this country from equaling, much less surpassing, the opportunities in pathology which up to 1914 were available in both Berlin and Vienna. The only way in which we can equal our German colleagues is by a thorough revision of the laws permitting postmortem examinations, which implies the scientific education of our legislators—always a matter of great difficulty—and by a united effort on the part of the medical profession, to suggest which was the purpose of my address before the Section on Pathology and Physiology of the American Medical Association.

Francis Carter Wood, M.D., New York.

AN APPEAL FOR EMBRYOS AND FETUSES

To the Editor:—In 1906 I observed certain malformations of the human shoulder blade, and have given them the collective name "the scaphoid type of scapula," and suggested some of its possible bearings in general and special pathology. Personal observations and those of others have associated this form of scapula with problems intimately connected with those of heredity, longevity and racial morbidity. Notwithstanding the many studies which have been made on the scaphoid type of scapula, all of these must be considered preliminary to those which must follow before we shall be in a position to draw far-reaching conclusions, if any, in reference to the significance of this and associated anomalies.

Probably the most suggestive observation connected with the scaphoid type of scapula in man is its age incidence; that is to say, *it occurs with great frequency among the young and with decreasing frequency in each succeeding decennium of life when studied in comparatively large groups of individuals in the same period of time.* There appear to be two possible explanations of this fact: Either (*a*) one form of shoulder blade changes into the other during periods of development and growth, or (*b*) many of the possessors of the scaphoid type of scapula are, in the broadest sense, the poorly adaptable, the unduly disease susceptible, the inherently weakened of the race. I have attempted to answer these questions by seeking evidence in various directions, and one of these has been a study of intra-uterine development of shoulder blades. My studies in this direction have been limited by the material at my disposal, which has been insufficient for a definite solution of all phases of this problem. I am, therefore, *appealing to the medical profession for embryos and fetuses in any and all stages of human development.*

Regardless of the length of time the material may have been in a preservative, of whatever nature, it can still be utilized in these studies, although it is desired that *fresh material* be immersed in 10 per cent. dilution of liquor formaldehydi in a suitable container, and any material, *old or fresh*, be forwarded to my address, charges collect. Due acknowledgment will be made to those forwarding material.

WILLIAM W. GRAVES, M.D., St. Louis.
727 Metropolitan Building.

"SPOILED CANNED FOODS AND BOTULISM"

To the Editor:—In THE JOURNAL, Oct. 4, 1919, there appeared under this caption a letter by Georgiana S. Burke discussing my paper on "The Bacteriology of Canned Foods" published in the *Journal of Medical Research* (**39**:349 [Jan.] 1919). The following are the most prominent points which call for explanation:

1. Mrs. Burke states that "Dr. Weinzirl restricts the term [commercial] to refer to those factory canned goods in which no spoilage has been detected and which are still being offered for sale." No such statement is made in the paper, nor was it contemplated. For the purpose of discussion merely, commercial packs were separated from experimental packs and from obviously spoiled samples.

2. "Three such spoiled cans [all sardines] are included among the 'commercial' or unspoiled cans which he examined. But for some unexplained reason he made bacteriologic examinations of only two of these cans, while the third can, which was the only one suggesting botulinus spoilage was not examined." No bacteriologically unexamined cans were included in the report. Mrs. Burke has not read correctly the table given on page 384 of my paper. The column designated "not examined" refers to cans not examined *for leakage*, after the can was emptied. The can in question did not contain *B. botulinus*.

3. "The point that I wish to make clear is that when Dr. Weinzirl says that '*B. botulinus* is not found in commercial canned foods,' he means that it is not found in unspoiled factory canned foods." On page 409 it is clearly stated that "members of the paratyphoid-enteritidis group were not found, nor was *B. botulinus* ever isolated."

4. "A second criticism . . . concerns . . . the total number of 'commercial samples' examined . . . 782. . . . This is too small a percentage on which to base a conclusion in regard to so vital a subject as food poisoning." The conclusion is based on 1,018 samples and not on 782 as stated by Mrs. Burke; furthermore, this number of analyses is at least fourfold that of any previous investigation, and the work was done under the most elaborate technic ever attempted.

5. "The result would be more convincing if the author had made tests for the specific botulinus toxin to substantiate his bacteriologic findings." Such tests were made, but it was thought best to withhold them until more results are available. They will be presented in due time by one of my colleagues in the work.

6. "No data are given by Dr. Weinzirl as to the length of the periods that had elapsed between the processing of the cans and the making of the bacteriologic examinations." This criticism is quite unreasonable, for it is well known that grocers do not keep such records, nor is the date of processing stamped on the can.

7. I am pleased to admit that one just criticism is made by Mrs. Burke, and that is that the length of time the cultures were incubated is not clearly stated in the paper.

8. "From a consideration of the foregoing, I am of the opinion that Dr. Weinzirl furnishes very unsatisfactory evidence on which to base his conclusion that food poisoning organisms, such as *B. botulinus, B. enteritidis*, etc., are not found in commercial canned goods." Briefly stated, the evidence is as follows:

A. I did not find *B. botulinus* in 1,018 samples of commercial canned foods, although careful search was made for it. The samples included spoiled, experimental and marketable goods, and practically every variety was represented.

B. All the literature known to me did not reveal a single instance of *B. botulinus* having been found in factory canned food in the United States. Since our annual consumption must approximate five billion cans of such foods, it is truly remarkable that not a single instance should be reported in our scientific literature. It is all the more remarkable because botulism exhibits highly characteristic symptoms.

C. From the analyses made and from the evidence presented in the scientific literature, the natural conclusion to draw is that *B. botulinus* and its toxin are not found or are exceedingly rare in factory canned foods.

This brings me to the one case reported by Mrs. Burke as botulism due to factory canned food. I was not informed of it at the time of writing my paper, and I am not now aware that the evidence has been published before. It must be remarked, however, that the evidence presented by Mrs. Burke is not convincing, for if we grant that the case was botulism, we are still uncertain that it came from the corn.

Finally, permit me to state that I am professor of bacteriology in the University of Washington, and that during a year's leave of absence I held a research fellowship in the Department of Preventive Medicine and Hygiene in the Harvard Medical School, where I studied the bacteriology of canned foods. I have never had the honor of occupying the other position indicated.

JOHN WEINZIRL, Seattle.
University of Washington.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THIALION

To the Editor:—Kindly inform me regarding thialion, manufactured by the Vass Chemical Company, Danbury, Conn. Please omit my name and address in answering in THE JOURNAL. H. C. W.

ANSWER.—Thialion is an heirloom of the days when lithium salts were supposed to be nature's antidote for all kinds of ailments, supposedly due to excess of uric acid. It was advertised as a uric acid eliminant and therefore good for all kinds of diseases. The Council on Pharmacy and Chemistry published a report on thialion in THE JOURNAL, Nov. 3, 1906. At that time thialion was advertised by the Vass Chemical Company as a "laxative salt of lithia" with the chemical formula "$3Li_2O.NaO.SO_3.7HO$," and an elaborate structural formula was also furnished. The Council reported that the product was not a definite chemical compound, but a mixture consisting chiefly of sodium sulphate, sodium citrate and small amounts of lithia. In recent advertisements, thialion is referred to as "A Non-Effervescing Lithiated Laxative Salt," "a non-hygroscopic, non-deliquescent, granular salt of lithia," etc., but the chemical formula does not appear, nor is any definite statement of composition furnished. According to this advertising, the "indications" for thialion are: "gout, rheumatism, uric acid diathesis, constipation, acute and chronic, sluggish liver, Bright's disease, albuminuria of pregnancy, asthma, incontinence of urine, gravel, cystitis, chronic lead poisoning, headache, neuralgia, neurasthenia and lumbago. Hay fever, etc."

SYPHILIS IN TWINS

To the Editor:—I am treating twin children, one of whom had symptoms of hereditary syphilis which improved very much with mercurial inunctions. The other child is perfectly well with no syphilitic symptoms at all. How do you explain the fact that one has inherited the disease and the other has not? Should I treat the healthy child as a preventive measure? DR. P., Mexico.

ANSWER.—Several cases have been recorded of the infection of one twin with syphilis at birth while the other has been healthy. In a case recorded by Dr. George F. Still, one of the twins died with severe and fatal syphilis at the age of seven months, whereas the fellow twin was apparently perfectly healthy. In a case described by Sir Herman Weber,

a syphilitic mother bore twin children, one of whom suffered with congenital syphilis and died at the age of seven weeks with diarrhea, while the other remained perfectly healthy. Thus such cases are not inconsistent with fact, although **a priori** one would expect the event to be rare. The child who apparently escaped syphilis should be watched carefully for the appearance of the disease. It might be a wise policy to give this infant moderate courses of mercury by inunction. This would do no harm, and if the child is syphilitic, would be of benefit.

PIONEER MEDICAL MISSIONARIES

To the Editor:—Who was the first American medical foreign missionary? When did he begin his service?

D. J. Herrington, M.D., Terlton, Okla.

Answer.—Dr. John Scudder entered medical missionary service in India under the Dutch Reformed Foreign Missionary Board, in 1819. His son, H. M. Scudder, appears to have founded the first hospital and dispensary in connection with American medical missions, at Arcot, India, in 1850. Peter Parker, who went to China as an American medical missionary in 1834, began to teach medicine to native students in Canton about 1839.

SODIUM CITRATE IN INFANT FEEDING

To the Editor:—Please inform me how sodium citrate is used in infant feeding, and why. C. P. Frisbie, M.D., Fillmore, Calif.

Answer.—Sodium citrate is added to the milk mixtures to prevent the formation of hard protein curds. Bosworth and Van Slyke have shown that increasing amounts of sodium citrate added to the milk increase coagulation time up to a limit of 1.7 grains to an ounce, after which the milk does not coagulate at all. If it is desired to use sodium citrate in this way, it may be prescribed safely in doses of 1 grain for each ounce of milk in the mixture.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

Alabama: Montgomery, Jan. 13. Chairman, Dr. Samuel W. Welch, Montgomery.

Arizona: Phoenix, Jan. 6-7. Sec., Dr. Ancil Martin, 207 Goodrich Bldg., Phoenix.

Colorado: Denver, Jan. 6. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

Delaware: Dover, Dec. 9-11. Sec., Regular Board, Dr. P. S. Downs, Dover. Sec., Homeopathic Board, Dr. H. W. Howell, 824 Washington St., Wilmington. Pres. Medical Council, Dr. Henry W. Briggs, 1026 Jackson St., Wilmington.

District of Columbia: Washington, Jan. 13. Sec., Dr. Edgar P. Copeland, Washington.

Florida: Jacksonville, Dec. 15-16. Sec., Dr. G. A. Munch, 1306 Franklin St., Tampa.

Hawaii: Honolulu, Jan. 5-8. Sec., Dr. J. R. Judd, Honolulu.

Iowa: Des Moines, Dec. 16-18. Sec., Dr. Guilford H. Sumner, Capitol Bldg., Des Moines.

Maryland: Baltimore, Dec. 9-12. Sec., Dr. J. McP. Scott, 137 W. Washington St., Hagerstown.

North Dakota: Grand Forks, Jan. 6. Sec., Dr. George M. Williamson, Grand Forks.

Oklahoma: Oklahoma City, Jan. 13-14. Sec., Dr. J. M. Byrum, Shawnee.

Oregon: Portland, Jan. 6. Sec., Dr. Frank W. Wood, 559 Morgan Bldg., Portland.

Pennsylvania: Philadelphia, Jan. 13-17. Pres., Dr. John M. Baldy, Harrisburg.

South Dakota: Pierre, Jan. 13. Sec., Dr. Park B. Jenkins, Waubay.

Virginia: Richmond, Dec. 9-12. Sec., Dr. J. W. Preston, 511 McBain Bldg., Roanoke.

Washington: Spokane, Jan. 6-8. Sec., Dr. C. N. Suttner, 415 Old National Bank Bldg., Spokane.

Wisconsin: Madison, Jan. 13-15. Sec., Dr. John M. Dodd, 220 E. Second St., Ashland.

Florida June Examination

Dr. William M. Rowlett, secretary of the Florida State Board of Medical Examiners, reports the written examination held at Jacksonville, June 16-17, 1919. The examination covered 7 subjects and included 70 questions. An average of 75 per cent. was required to pass. Of the 35 candidates examined, 30 passed and 5 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Georgetown University	(1882)	77.4
National University Medical Department	(1900)	81.6
Atlanta Medical College	(1914)	81.7, (1915) 86.1
College of Physicians and Surgeons, Chicago	(1910)	83.1
Chicago College of Medicine and Surgery	(1918)	87.5
University of Illinois	(1911)	85.5
Central College of Physicians and Surgeons	(1896)	75.3
University of Louisville	(1909) 85.1, (1918)	82.5
Tulane University	(1918) 90, (1919)	86.3, 89.8
Medical School of Maine	(1898)	89.8
Baltimore Medical College	(1890)	77.1
College of Physicians and Surgeons, Baltimore	(1895)	81.5
Johns Hopkins University	(1915)	91.4
Maryland Medical College	(1912)	77.7
University of Maryland	(1910)	91.8
College of Physicians and Surgeons, Boston	(1912)	84.7
Western Reserve University	(1887)	80
University of Oklahoma	(1918)	80.4
Medico-Chirurgical College of Philadelphia	(1910)	83.1
Jefferson Medical College	(1880)	80.6
Med. Coll. of the State of S. Carolina	(1900) 83.1, (1910)	78.3
University of Tennessee	(1918)	83.6
Vanderbilt University	(1894)	80.5
Medical College of Virginia	(1917)	82
University of Havana	(1896)	75.3
FAILED		
University of Alabama	(1904)	72.3
University of Louisville	(1904)	61.4
Missouri Medical College	(1887)	73.8
Chattanooga Medical College	(1909)	38.8
Royal College of Physicians and Surgeons, Ontario	(1887)	51

Colorado July Examination

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written examination held at Denver, July 1, 1919. The examination covered 8 subjects and included 80 questions. An average of 75 per cent. was required to pass. Of the 34 candidates who took the physician's and surgeon's examination, 28, including 4 osteopaths passed, and 6, including 3 osteopaths failed. Twenty candidates were licensed through reciprocity. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
University of Colorado	(1919) 82.2, 83, 83.1, 83.2, 84.2, 84.3, 84.6, 85.1, 85.6*, 86, 86.2, 86.7, 87.1, 87.2, 87.3, 88.2, 88.3, 88.8, 92.3.	
Rush Medical College	(1919)	83.9
Kansas City Univ. of Phys. and Surgs.	(1919)	76.5
Harvard University	(1915) 87.1, (1917)	88.3
University of Cincinnati	(1919)	83.8
FAILED		
Atlanta School of Medicine	(1910)	64.3
National University of Arts and Sciences	(1918)	71.3
St. Louis College of Phys. and Surgs.	(1919)	61

College	Year Grad.	Reciprocity with
LICENSED THROUGH RECIPROCITY		
The Homeopathic Medical College	(1888) Missouri, (1901)	Nebraska
Northwestern University	(1902), (1904), (1916)	Illinoios
Rush Medical College	(1914)	Illinois
State Univ. of Iowa, Coll. of Med.	(1897) N. Mex., (1903)	Iowa
Hospital College of Medicine, Louisville	(1896)	Missouri
Kentucky School of Medicine	(1898)	Missouri
Baltimore Medical College	(1898)	Maryland
College of Physicians and Surgeons, Baltimore	(1907)	W. Virginia
John A. Creighton Medical College	(1903)	Kansas
Barnes Medical College	(1896)	Kansas
Missouri Medical College	(1898)	Missouri
Univ. and Bellevue Hospital Medical College	(1917)	New York
St. Louis University	(1906), (1910)	Illinois
University of Nashville	(1906)	Tennessee
McGill University	(1896)	Iowa

*Undergraduate.

Utah July Examination

Dr. G. F. Harding, secretary of the Utah State Board of Medical Examiners, reports the written examination held at Salt Lake City, July 7-8, 1919. The examination covered 19 subjects and included 100 questions. An average of 75 per cent. was required to pass. Eleven candidates were examined, all of whom passed. Four candidates were licensed by reciprocity. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Chicago College of Medicine and Surgery	(1910)	86
Loyola University School of Medicine	(1919)	75
Rush Medical College	(1917)	85.9
Harvard University	(1917)	86.9
Washington University	(1919)	82.8, 85.5
Jefferson Medical College	(1918)	82.6, 85
University of Pennsylvania	(1918) 86.6, (1919)	84, 84.9

College	Year Grad.	Reciprocity with
LICENSED THROUGH RECIPROCITY		
Hahnemann Medical College of the Pacific	(1912)	California
Chicago College of Medicine and Surgery	(1917)	Wyoming
Tulane University	(1901)	Alabama
St. Louis Medical College	(1886)	Missouri

Medicolegal

A Physician's Letter That Was Not Evidence

(Richardson v. North American Life & Casualty Co. (Minn.), 172 N. W. R. 131)

The Supreme Court of Minnesota holds that, in an action to recover on a life insurance policy, in which action misrepresentation of the physical condition of the insured was interposed in defense, a letter written by a physician who had treated the insured at about the date of the insurance contract, addressed to the insurance company, and therein stating the physical condition of the insured as he found from examination, as to the beneficiary was hearsay and inadmissible in evidence, the letter being no part of the proofs of death and not procured at the instance of the beneficiary, but having been procured solely by the defendant and in furtherance of its defense.

Detention of Persons Infected with Venereal Virus

(Ex parte Brown (Neb.), 172 N. W. R. 522)

The Supreme Court of Nebraska, in denying a writ of habeas corpus, and dismissing the cause, says that this was an original application in this court for the writ. The petitioner was quarantined in the detention home in the city of Omaha under an ordinance of that city, and the question presented was whether such detention, under the circumstances, was justifiable. The case was presented to this court on a stipulation of facts and without other evidence. The stipulation showed that the petitioner had been arrested on a charge of "being an inmate of an ill-governed house"; that she was tried on this charge and found guilty, and appealed the case to the district court; and thereupon the court trying her approved of her bond on appeal, and notified the keeper of the jail to release her from confinement "on the ground that she had furnished an appeal bond as provided by law." But these facts were immaterial in this case, because it was further shown by the stipulation that the health commissioner of the city of Omaha "caused said petitioner to be examined, and under his direction said examination was made and said petitioner found to be infected with communicable venereal virus; that thereupon said health commissioner ordered said petitioner to be isolated and quarantined by the proper authorities in the detention home of the city of Omaha for treatment for such reasonable time and in such reasonable manner as to prevent the danger of said petitioner from communicating such infection to others, and until the danger of the infection should be removed."

The petitioner cited and relied on *Wragg* v. *Griffin* (Iowa), 170 N. W. 400. In that case their statutes are cited, and the rules of the local board of health referred to, and the law is stated to be that they "do not authorize the board of health to deprive of his liberty one suspected of venereal disease for the purpose of forcing the exposure of his body to examination and compelling the extraction of blood from his veins in search of evidence of the disease." And, in the opinion, it is said:

> It may be said at the outset that the objection raised by this petitioner does not necessarily challenge the validity of any statute or any rule of the board of health by which authority is given to quarantine persons who are afflicted with contagious disease, or to remove or segregate a person so diseased from his own home for detention in a separate house or detention hospital and there detain him until he has so far recovered his health as to be no longer a menace to the health of the community.

In this case the stipulation showed that the petitioner was "found to be infected with communicable venereal virus," and that she was only detained "for such reasonable time and in such reasonable manner as to prevent the danger of said petitioner from communicating such infection to others and until danger of the infection should be removed." There can be no doubt that under the Nebraska statute (Rev. St. 1913, Sections 4082, 4094), the city could by ordinance provide for such detention, and the ordinance as quoted in the petitioner's brief provided for such detention. In other words, the court holds that, under the Nebraska statute, the city of Omaha is authorized to provide for the detention in the detention home in that city of persons "found to be infected with communicable venereal virus," for such reasonable time "as to prevent the danger of . . . communicating such infection to others." And, under such circumstances, such person will not be entitled to a writ of habeas corpus for release from such detention.

Mistaking Pregnancy for Tumor—Expert Testimony

(Brewer et ux. v. Ring et al. (N. C.), 99 S. E. R. 358)

The Supreme Court of North Carolina affirms a judgment in favor of the defendants, who were charged with malpractice in diagnosing a case of pregnancy as one of tumor. The court says that, according to the defendants, it was very difficult to determine the woman's true condition, and that, in their opinion, the indications were that it was an ovarian tumor or cyst, but that the true condition could not be determined otherwise than by an exploratory operation, which was the nature of the one performed. The woman, aged 47, married, had given birth to three children at intervals of three and two years, the last one having been born twelve years prior to her visit, Jan. 8, 1917, to Dr. Ring. From the date of the birth of the last child until the latter part of August, 1916, she was regular in her periods, and only about Sept. 21, 1916, noticed the first irregularity, the period at that time being partially suppressed, and continuing with slight but constant flow, broken by periods of one or two days with an absence of flow. With the exception of one week, these conditions continued until Jan. 8, 1917, up to which time she had not observed any signs of pregnancy, but stated to Dr. Ring that she thought she had a tumor. There was an apparent enlargement of the abdomen. Without coming to a definite conclusion as to the true condition, but strongly suspecting a tumor, Dr. Ring advised going to see the other defendant, looking to an operation. That defendant made two examinations and diagnosed it as a submucous fibroid tumor or possibly a cyst, but said he was not sure about it, and advised an exploratory operation. An incision was made, which showed that the woman was only normally pregnant. There was no indication of tumor. The wound was closed, the patient recovered from it, and in due course she was delivered of her child without any untoward incident in the accouchment. There was much evidence taken at the trial on the questions of negligence and damages as to each of the two defendants, and the jury returned the following verdict: "Were the plaintiffs injured by the negligence or want of skill, of the defendants, or either of them? Answer: No."

Taking up the question of what are the duties and responsibilities of a physician and surgeon in the diagnosis of a case and the treatment of a patient under his care, the court says that a physician entitled to practice his profession, possessing the requisite qualifications, and applying his skill and judgment with due care, is not ordinarily liable for damages consequent on an honest mistake or an error of judgment in making a diagnosis, in prescribing treatment, or in determining on an operation, when there is reasonable doubt as to the nature of the physical conditions involved, or as to what should have been done in accordance with recognized authority and good current practice. Whether errors of judgment will or will not make a physician liable in a given case depends not merely on the fact that he may be ordinarily skilful as such, but whether he has treated the case carefully, and has employed in its treatment such reasonable skill and diligence as is ordinarily exercised in his profession. There is a fundamental difference in malpractice cases between mere errors of judgment and negligence in previously collecting data essential to a proper conclusion, or in subsequent conduct in the selection and use of instrumentalities with which the physician may execute his judgment. If he negligently omits to inform himself as to the facts and circumstances, and injury results therefrom, then he is liable. Whether the fetus was quick with life, so that the beatings or sounds of the heart could be detected by examination, was a question of fact for the jury to decide on the evidence, as were the other questions involved.

It was competent to ask an expert witness whether, in his opinion, on the facts stated in the hypothetic questions, if found by the jury on the evidence, the diagnosis was made according to the approved practice and principles of the medical profession. It is not the province of an expert to draw inferences of fact from the evidence, but simply to declare his opinion on a known admitted or hypothetic state of facts. The rule is that the expert must base his opinion on the supposition that the jury will find the facts recited in the hypothetic question, and there must be evidence of those facts.

Inadmissible Bases for Expert Testimony

(Bell v. Milwaukee Electric Railway & Light Co. (Wis.), 172 N. W. R. 791)

The Supreme Court of Wisconsin, in affirming a judgment for $25,000 damages in favor of the plaintiff for injury to his eyes by an electrical explosion or flash on one of the defendant's cars on which he was a passenger, says that a physician who was called as an expert witness by the defendant was asked on cross-examination by the plaintiff's counsel if he considered Oppenheim an authority on optic atrophy. On receiving a qualified negative answer, and the statement that the witness had read a part of Oppenheim's works, he was asked if he remembered at some time in his reading certain language. The witness stated that he could not recall having read it, and that he could not deny that it was a correct statement of what is generally taken to be the effect of dazzling on the human eyes by men skilled in the medical profession. Counsel stated that his purpose in asking the question was to ascertain whether or not the witness was familiar with this passage. Under repeated decisions of this court its admission was error. If, under the guise of finding out a witness' familiarity with the contents of medical works, you can read extracts therefrom to him and inquire if he is familiar with them, then you can get the contents of every medical book before the injury. That, this court has, for good reasons, declared cannot be done.

Another physician called as an expert witness by the plaintiff, whom he had examined since this action was begun, but had never treated, was allowed to give an opinion that the plaintiff was totally blind in his left eye, basing such opinion in part on his examination and in part on subjective symptoms, or on what the plaintiff had told him. This was error. A physician who treats a patient may give an expert opinion, based on the result of his examination and statements made to him by the patient, but not one who does not treat the patient. The reason for the application of different rules to the two cases lies in this: When a patient submits himself to treatment, he does so for the purpose of curing himself of the malady afflicting him, and he is desirous to do so, and the presumption is that he will tell the truth to the physician. If he does not, he knows that not only may a cure not be effected, but he may seriously jeopardize his health by giving false information or withholding important information. But when he goes to a physician for examination for the purpose of having him testify, but not treat him, he runs no risk by giving false information, and the inducement may be to hide rather than to reveal the truth.

But the court does not think that the admission in evidence in this case of the incompetent testimony was prejudicial. There was a sharp conflict in the expert medical testimony as to the extent and permanence of the plaintiff's injury. The fact, however, that there was a serious dazzling explosion or flash on the car, and that the plaintiff sustained a serious injury to the left eye, and probably to the right one also, was clearly established. He was on the witness stand a great many times during the protracted trial, and he testified he was blind; the jury saw him and had an opportunity to note his conduct and appearance, and to judge more correctly of his credibility than this court had. He said he was totally blind, and the jury no doubt believed him. The medical testimony was in direct conflict, even with the incompetent evidence out. In such a situation this court cannot say that the result would probably have been different, if the errors in the admission of evidence had not occurred, or that the result reached was clearly wrong.

Social Medicine, Medical Economics and Miscellany

THE CARDIAC CLINIC AT THE CENTRAL FREE DISPENSARY OF CHICAGO

LEO L. J. HARDT, M.D., M.S.
AND
HELEN BECKLEY
Director of Social Service
CHICAGO

New York, previous to the war, found it necessary to establish a number of cardiac clinics in connection with its hospitals and dispensaries in order to meet the growing demands for proper medical treatment of its cardiac cases. Most of these clinics united to form what was known as the "Association for the Prevention and the Relief of Heart Disease," with Dr. Lewis A. Connor as its president. But owing to the fact that so many of the physicians were called into service, the clinics were to a large extent discontinued. A similar need was felt in Chicago, and an attempt was made to establish a cardiac clinic at the Central Free Dispensary in 1918; but as most of our men were called into service, it became necessary to discontinue it in order to meet the more urgent demands of the moment. In March, 1919, the work was again started and has progressed more rapidly even than was anticipated. Conferences are now being held every Wednesday and Saturday morning, and at each meeting there are from ten to twenty patients. Since the opening of the clinic in March, approximately 140 patients have been examined.

ROUTINE PROCEDURE

When the patients enter the clinic, a complete history, both social and medical, is taken. Special cardiac histories have been devised which simplify and at the same time give more complete information on which to base the diagnosis and subsequent treatment. The patients are then given a complete physical examination, including blood, roentgen-ray, electrocardiograph and urine examinations, whenever indicated. The medical advice given is largely dependent on the patient's home and working conditions. If his work is of such a nature as to interfere with his physical condition, he is advised to change his employment, and whenever possible, the social worker helps him find suitable work. Each patient is then advised as to the amount of physical exertion his heart will tolerate. When the heart is badly decompensated, he is sent to the Presbyterian Hospital where he can be placed in bed with absolute rest until his condition warrants his returning to work. After the first visit, an appointment is made, and the patient is urged to return at a later date for observation. In the interval, the social worker visits him at his home and place of employment to see that the physician's instructions are being carried out. A careful social record is kept on the medical chart so that one may see at a glance just what the patient's home and working conditions have been. For subsequent visits to the clinic, the social history is of utmost value as a guide in giving each patient the proper advice. Patients that have complications other than cardiac are referred to other departments in the dispensary. Many children are sent to the nutrition clinic, others to the nose and throat, and dental clinics, and still others to the syphilis clinic.

TYPES OF CASES

Patients are referred to the clinic from a number of different organizations. Approximately nine different sources are now represented. The board of education has referred children between the ages of 14 and 16 who are anxious to go to work, but who because of their heart conditions are not given a working certificate until it is recommended by the cardiac clinic. If their conditions are very serious, they are advised against going to work and encouraged to continue their education as long as possible. Thirty-nine have been referred to the clinic, and of this number, twenty-four are now working. They are seen from time to time and

their employment is supervised. Dr. Brunner of the board of education is greatly interested, and it is hoped that as soon as the number of children warrants it, arrangements will be made in some of the schools to have classes on the first floor for cardiac cases. The social service department of the Cook County Hospital has referred twenty-four of its discharged patients to the clinic for further medical care and supervision. A few cases have been referred by private physicians. A large number have come directly to the clinic, because they were told by other physicians that they had heart trouble, whereupon they came to the clinic for corroboration and advice. A number have been referred from the various departments of the dispensary. The United Charities have referred thirteen; the Jewish Aid Society, four; the Central Charity Bureau, three; the Juvenile Court, three; the Visiting Nurses' Association, two, and the Immigrants Protective League, one.

In many instances, the patients are the heads of families, or are young adults who are helping to bear the responsibilities of the family income. They need social, as well as medical treatment, that will not only tide the family over present difficulties, but will also give a working plan for their future economic life. In such instances, it is not just temporary relief and supervision, but the making of a definite plan for the future that is required. In some cases the patients are children who should have vocational training in order that they may fit themselves to be independent in spite of their physical handicap. The social worker cooperates with employment managers of industrial plants in securing temporary relief for the various patients. In August, the clinic was without a worker, and because of lack of follow-up work, the attendance was very low.

Of the 140 patients seen in the clinic, twelve were sent to the hospital. Two died while at the hospital (one of hypertension with a systolic blood pressure of 300; the other of aortic regurgitation and stenosis); a third was sent home, but later died. All of the others have shown a decided improvement in their symptoms. During the summer months, twenty of the patients were sent on outings to camps, sanatoriums and convalescent homes. Sixteen of our patients are receiving special nutritional care. It is interesting to note that only forty-two have required cardiac stimulants, such as digitalis, strychnin and caffein. Nine are under antisyphilitic treatment. The active therapeutic treatment, although essential, is by no means the main object of such a clinic. Prophylactic management of those cardiac cases in which slight injury to the heart has been noted should be the main aim, and only by repeated instructions to patients, particularly children, can we hope to prevent the numerous cardiac decompensations found in later life. This cannot be accomplished until a sufficient number of organized clinics are established in Chicago, and until such organizations can gain the cooperation of the various industrial plants and public schools. Many of our schoolchildren suffering from heart disease are undertaking strenuous courses in the gymnasium today. Ignorant of the seriousness of their condition, they are liable to undertake exercises which may lead to cardiac decompensation. As yet we have no careful supervision of such patients; not a few of them have come to the clinic with heart lesions, and complaining of dyspnea, dizziness and palpitation, while doing routine gymnastic work in school.

VOCATIONAL GUIDANCE

Some provision should be made for the employment of those patients unable to do regular work. This could best be accomplished by establishing a vocational department in connection with the clinic, where patients could learn a vocation that would be of value to them as a means of livelihood. Here, their work could be carefully supervised, and the amount of physical work could be graded in each individual case. Such patients in a well organized occupational department could soon be earning enough to maintain themselves as well as their families. Excellent cooperation has been established between the Central Free Dispensary and the Henry Favill School of Occupation. This institution is not large enough to meet the demands of a cardiac clinic of this size, and a lack of funds prevents the institution's branching out along the pratical vocational lines that these patients require. Six of the patients from the cardiac clinic have been referred to the Henry Favill School with special instructions as to the type and number of hours of work that they can tolerate. They are carefully supervised by a trained worker who reports to the clinic the general ability and progress of the patient. They do weaving, chair-caning, basket-making, sewing and special carpentry. Their hours of work are gradually increased as they become stronger. Unfortunately, the Favill School is unable to take children under 16 years of age or to take care of patients who are unable to leave their homes. The Service League for the Handicapped has provided material for knitting to be done by our patients at home. This does not solve the problem, as it gives no vocational training which would make the patients economically independent.

VALUE OF THE CLINIC

The educational and therapeutic value of such a clinic to the patient is self-evident. In a specialized department of this kind, a patient may receive more individual attention, and the follow-up work may be more unified and accurate. The physicians and students are also greatly benefited because of the almost absolute control an organization of this kind may have over the patients. The therapeutic effect on each individual case may be watched from time to time and any beneficial or deleterious results readily noted. In one single clinic, we were able to see cases of aneurysm, auricular fibrillation, heart block and several mitral lesions. The patients are always willing to cooperate with the physician, thus benefiting themselves personally, and they are also willing to aid by offering themselves for teaching purposes. Records are kept on file, so that on a moment's notice patients may be called on to appear in the clinic for further observation by the physicians and students. Should a series of cases of auricular fibrillation be desired, we need only notify these patients, and invariably enough will appear to make a very desirable clinic.

One can readily see how the establishment of these clinics with a unified organization in a city as large as Chicago can be of the utmost value to the community. In order to increase the efficiency of such a clinic, a full-time social service worker should be employed to devote her time to follow-up work and to the keeping of careful records for statistical purposes. The main object of this clinic should be to teach the patients a vocation that is best suited to their physical capacities. By so doing, many of our cardiac cases, now dependent on charitable organizations, may be made a benefit to the community and be economically independent. Every well established general hospital can and should have, as a part of its outpatient department, a well organized cardiac clinic.

122 South Michigan Avenue.

NUPTIAL PROTOGENESIC OR FIRST BIRTH DISTRIBUTION

In a series of 220,021 nuptial first births in Australia during the years 1907-1914, inclusive, the Australian statistician Knibbs has compiled the records according to "age last birthday" and "duration of marriage," by which he arrived at what may be termed "the nuptial or first birth distribution." In order to reduce the records so compiled to more of a percentage basis, Knibbs has multiplied the actual number of births in each instance by the factor that would make the total 1,000,000, and then has reported for each single month of duration of marriage from one to twelve and for each year from one to twenty-six the proportionate number of births that would occur on this basis. On examining this table one is struck by the large number of births that must be regarded as originating from prenuptial insemination. Age 16 of wife shows 382 births in a million during the first month after marriage, 423 during the second month, 514 during the third, 532 during the fourth, 568 during the fifth, 541 during the sixth, 486 during the seventh, 295 dur-

ing the eighth, and only 91 during the ninth and 95 during the tenth month. Age 19 of wife shows 1,886 births during the first month after marriage, 2,227 during the second month, 3,513 during the third, 4,272 during the fourth, 5,127 during the fifth, 6,054 during the sixth, 6,790 during the seventh, 4,609 during the eighth, 2,850 during the ninth and only 3,909 during the tenth month. Age 21 of wife shows 1,877 births during the first month after marriage, 2,309 during the second, 3,454 during the third, 4,640 during the fourth, 5,704 during the fifth, 6,981 during the sixth, 8,331 during the seventh, 6,613 during the eighth, 4,613 during the ninth and 9,122 during the tenth month. Not until age 21 is reached is the number of births during the tenth month greater than the number during the seventh month. The relative proportion of births during the tenth month, as compared with those during the seventh month, increases from age 21 on. At age 22 of wife it is 11,981 as to 7,254; at age 24, 11,467 as to 4,959; at age 27, 7,649 as to 2,254; at age 30, 4,191 as to 877. After age 30 of wife there is not much difference in the relative proportion for the following ages. To be sure, a certain percentage of the births after six and seven months may be due to postnuptial insemination. What is the significance of the foregoing facts? Does a considerable portion of Australia's population believe that the marriage ceremony is superfluous unless children are to be born whose births must be made legitimate before the law? But before we apply this assumption to Australia, it might be interesting to know what results similar investigation would show in this and in other countries.

Society Proceedings

COMING MEETINGS

Society of American Bacteriologists, Boston, Mass., Dec. 30-31.
Southern Surgical Association, New Orleans, Dec. 16-18.
Western Roentgen Society, Chicago, Dec. 10-12.

SOUTHERN MEDICAL ASSOCIATION

Thirteenth Annual Meeting, held at Asheville, N. C., Nov. 10-13, 1919

The President, Dr. L. F. Barker, Baltimore, in the Chair

Cautery in Acute Epididymitis

Dr. J. C. Vinson, Tampa, Fla.: The procedure when properly carried out is painless. The treatment is essentially an office procedure. The effect on the infection is obvious. The immediate and remote effects are as good, if not better, than the cutting operation.

Value of Large Single Doses of Digitalis in Treatment of Heart Disease

Dr. G. Canby Robinson, St. Louis: The administration of the tincture of digitalis in large single doses is advocated as a useful method of treatment in certain cases of heart disease, provided the tincture is standardized, the dosage properly regulated, and the patient under close observation. This method of administration not only brings the heart rapidly under the influence of the drug, but also affords a much closer means of studying its effect than the older method of small repeated doses. Problems of dosage, especially the relation to body weight, still need solution. The beneficial effect of digitalis in cases with cardiac irregularity caused by auricular fibrillation is especially emphasized by our experience.

Scientific Teamwork in Diagnosis and Treatment of Diseases of the Eye, Ear, Nose and Throat

Dr. E. M. Cary, Dallas, Texas: Group practice is desirable, whether it be from the point of view of a surgeon, a medical man, or an ophthalmologist dominating the situation.

Treatment of Visceroptosis

Dr. F. W. Wilkerson, Montgomery, Ala.: For treatment, these patients may be classified as (1) those who can be given ambulatory treatment and (2) those who require a preliminary period of rest in bed. The general principles of treatment are followed in both cases, the mild cases coming in the first class, the severe ones in the second class. Not all patients who have visceroptosis can be cured, but about two thirds can be given permanent relief and the other third temporary relief.

Intestinal Protozoa: Diagnosis and Treatment

Dr. S. K. Simon, New Orleans: In only one instance do we possess a specific remedy against intestinal protozoa: infection by *Endameba dysenteriae*, which is promptly controlled by the use of ipecac or its alkaloid constituents. Emetin merits a high place in the treatment of the acute or active phases of all forms of endamebiasis, but cannot be depended on for the complete clearing of the intestinal tract in chronic cases. For this purpose I believe the entire powdered ipecac root is needed. This drug must be administered daily, in full concentrated doses, covering a period of from ten days to two weeks. If given by mouth in one dose in the form of enteric coated pills, the ipecac can be made to reach the large bowel, where absorption takes place directly within the confines of the disease area. The early optimism in regard to the Jutte method of transduodenal lavage has not proved justifiable, as I have convinced myself from numerous and repeated observations.

Effect and Maintenance of Intra-Abdominal Pressure

Dr. J. B. Fitts, Atlanta, Ga.: Normal intra-abdominal pressure is a necessary physiologic entity. Low intra-abdominal pressure is a factor in general physical inefficiency. It is of particular importance in disease of the gastro-intestinal tract. It can be maintained by the application of physiologic principles.

Focal Infection

Dr. Thomas D. Coleman, Augusta, Ga.: In the treatment of cases of focal infection, it is essential that (1) the focus or foci should be removed when the end justifies the means, and one should keep in mind the possibility not only of not doing good, but also of doing harm: "Non nocere." (2) Every agency, both in building up the bodily defenses and ameliorating symptoms as they arise, should be employed. (3) To all those who lean to radicalism, I would suggest the motto: "Festinate lente."

Lesions of the Fifth Cranial Nerve in Connection with Auditory Vestibular Disturbance

Dr. E. R. Carpenter, Dallas, Texas: The otologist should never be contented with making a diagnosis of nerve deafness, but he should determine whether or not the lesion is of intracranial origin. The prognosis and treatment depend on this point. The neurologist or brain surgeon may not be consulted until the disease has advanced too far to prevent deafness or loss of life. In Cushing's book on "Tumors of the Auditory Nerve," the sad fact appears that in his thirty-five cases the first symptom was disturbance of hearing, yet all the patients came to him in an almost hopeless condition, being either paralyzed, blind, or nearly blind, or they had some other equally serious complication that rendered the observation exceedingly dangerous and the prognosis serious even if they survived the operation.

Intranasal Surgery Without Packing

Dr. William T. Patton, New Orleans: The advantages of leaving out packing are greater comfort to the patient, who often is able to breathe through the nose continually, and much less reaction to disease in the nose. Usually twenty-four hours after operation, if clots are clearing out of the nose, it is surprising to see how little reaction remains. There really seems to be less bleeding without packing in most cases, that is, provided we use the epinephrin spray, cold compresses, and keep the patient in a reclining position. If a hematoma forms between the flaps, it is a simple matter to curet and again seal the flaps, applying compound tincture of benzoin. If there is much hemorrhage, it may become necessary to pack. Again no harm is done.

Vincent's Disease

DR. JOHN J. SHEA, Memphis, Tenn.: Vincent's disease is a degenerative condition and not an inflammatory condition. A smear should be made and studied of every acute throat and gum disease, and not all the reliance be left to a culture. Medicinal treatment is only temporary, and surgical intervention is indicated for permanent relief. The infection should be made reportable, and in armies, schools and institutions, it should be considered contagious and should be quarantined. One should always work in conjunction with a competent dentist.

Radical Mastoid Operation: Indications

DR. ELBURNE G. GILL, Roanoke, Va.: The radical mastoid operation is not indicated in all cases of chronic aural suppuration. It is possible to get dry cavities in most cases. The hearing in the average case should be improved. With proper technic, the operation is not dangerous. The condition calling for operation is usually a dangerous one, and is too frequently dealt with lightly.

Comparative Study of Gastric Motility as Determined by the Ordinary Test Meal and Six Hour Barium Retention

DRS. HARVEY G. BECK and JOHN EVANS, Baltimore: Our observations indicate that frequently when adhesions involve the pylorus and duodenum, the power of the stomach to empty itself is at first increased and later diminished. The degree of gastric acidity seems to have little or no influence on the amount of gastric contents after a test breakfast or six hour retention. No interpretation should be made on this point without studying the acid curve by the Rehfuss method of fractional gastric analysis. The motor function of the stomach can be determined by the complete removal of a standard test meal with the partial vacuum method. There is no constant relation between the motor function as determined by the test meal method and six hour barium. Six hour barium retention occurs after a motor meal if the stomach contents exceed 200 c.c. in fifty minutes or 150 c.c. in sixty minutes. The comparative results of the two methods are most uniform and constant in duodenal ulcer. Six hour barium retention occurs more frequently in adhesions involving the pyloroduodenal region than in either duodenal or gastric ulcer. There is little evidence to show that the secretory function has any influence on the motor function in pathologic conditions affecting the stomach and duodenum.

Interpretation of Muscular Imbalance

DR. HIRAM WOODS, Baltimore: The meaning of muscular imbalance cannot be determined by the balance test alone. Functional force of muscles should be determined by their power to overcome prisms. Owing to the close relation between accommodation and convergence and the ease with which they can be separated, convergence prism strength must be regarded as the extent to which this separation is possible, not as indicating the intrinsic power of the interni. In horizontal heterophoria the basis of calculation should be divergence power (abduction) because of the single nerve supply of the externus. The minimum of abduction should be 5 degrees, the minimum of positive relative convergency should be from three to four times as great. The vertical recti should practically balance each other at from 2½ to 3 degrees. In prescribing prisms for constant wear, the muscle to be helped should be weaker than normal and its antagonist stronger; otherwise, there is danger of converting one form of heterophoria into another.

Signs and Symptoms of Hypopituitarism

DR. STEWART R. ROBERTS, Atlanta, Ga.: Undergrowth, dwarfism, dysgenitalism, feminine hirsuties, feminine type skeleton, lack of secondary sexual characteristics, genital atrophy and impotence, headaches, languor and weakness may appear in varying degrees in different cases at different periods. The classic signs and symptoms of hypopituitarism are subnormal temperature, dry skin, adiposity, low blood pressure, slow pulse, constipation, amenorrhea, drowsiness and inactivity. Lack of attention, impairment of memory, actual dulness, and mild psychoses to actual convulsive seizures with epileptic attacks may occur. The cause may be glandular deficiency of one or both lobes, a pituitary tumor with damage of the gland, or a neighborhood tumor or hydrocephalus with pituitary pressure. The symptoms of intracranial tumor may be more prominent than those of pituitary deficiency. Infantilism, dysgenitalism and obesity, symptoms of intracranial tumor, warrant pituitary study.

Responsibility of Physicians Who Treat Malaria Cases

DR. C. C. BASS, New Orleans: The important duties or responsibilities of physicians who treat malaria cases are: To begin promptly proper treatment with the specific remedy for the disease, quinin, not neglecting it for spectacular methods of treatment; to advise the patient of the proper diagnosis and nature of the disease; to advise him of the mode of transmission of the infection and of the great danger of transmission to other members of his family and associates, endangering their health and perhaps life, and to advise and prescribe specific treatment which will disinfect the patient so as to avoid relapse and prevent transmission.

Coccidioidal Granuloma

DR. KENNETH M. LYNCH, Charleston, S. C.: No successful treatment has been devised, and all patients but one died within from a few weeks to nine years. The patient who recovered was one in whom the infection was recognized in an extremity and the infected member amputated apparently before dissemination had occurred. I saw the first case of *Coccidioides immitis* infection in South Carolina and east of the Missisippi, it being the forty-fifth case, the second in a woman, and the fourth that had not been in California. It is highly probable that infection by *Coccidioides immitis* has occurred in cases in which we have not recognized it, and it is desirable that those cases of supposed tuberculosis in which the tubercle bacillus is not demonstrable should be investigated carefully for this or kindred infection.

Status of Amebic Dysentery: Diagnosis and Treatment

DR. RANDOLPH LYONS, New Orleans: Macht and Fisher believe that benzyl benzoate has amebicidal qualities. Haughwout and Lantin treated eight patients (including Osuzano's two patients); all were benefited. The dose varied from 10 to 30 drops, three times daily. The cases have not been followed long enough to make any definite statement as to cure. Ipecac and its alkaloids are still the sheet anchor in the treatment of amebic disease. The tendency of the times is to administer a combination form of treatment, that is to say, emetin hydrochlorid is given hypodermically in conjunction with the oral administration of either emetin hydrochlorid, powdered ipecac or emetin bismuth iodid. Occasionally some other drug may be administered by mouth, as chapparo or bismuth.

Subacute Combined Degeneration of Spinal Cord

DR. WILLIAM G. SOMERVILLE, Memphis, Tenn.: There is a similarity between the nervous symptoms of subacute combined degeneration of the spinal cord and pellagra. Both diseases have in common secondary anemia, gastro-intestinal disturbances, degeneration of the posterior and lateral columns of the cord, pigmentation of nerve cells, and frequent occurrence of mental symptoms. One of the chief points of difference is the presence in pellagra of the characteristic skin lesions. The secondary anemia is common to the two, but more intense in the subacute combined degeneration, and more likely to assume a pernicious type. *Cercomonas intestinalis-hominis* has been found in the intestinal discharges of both, in every case of pellagra, according to Jelks, and in my case of subacute combined degeneration.

The Minnesota Rural Clinic

DR. E. J. HUENEKENS, Minneapolis: The value of these rural clinics consists in: the teaching of the proper feeding of infants and children, and the especial value of maternal nursing; general hygienic instructions; the value of fresh air, sunshine and proper clothing; the early recognition of defects before they are obvious to the parents; the awakening of general interest in child health and child welfare, and last, but not least, the education of physicians.

Hookworm and Manifest Tuberculosis

Dr. Roy D. Adams, Washington, D. C.: While hookworm disease and tuberculosis are often referred to in the literature as being related, and though the inference is frequently that the connection is one of cause and effect, no serious studies have been made which place the relationship on anything firmer than a speculative basis. A generally lowered resistance, incidental to hookworm disease, especially evident as anemia and malnutrition, is credited with being the essential factor producing lapse of immunity to tuberculosis. There is no evidence establishing any specific relationship between the two diseases. As it has been demonstrated that the mortality from tuberculosis may be reduced by a measure so simple as the elimination of hookworm when double infection exists, the obligation of the physician with regard to diagnosis and treatment is apparent.

Empyema

Dr. Frank K. Boland, Atlanta, Ga.: Making the earliest possible diagnosis of acute empyema is a burden which falls on the general practitioner, the pediatrician and the internist, who must ever be ready with the exploring needle. How often has pus in the chest been called unresolved pneumonia for so many days or weeks that the condition was already chronic before its presence was known? Tube drainage and suction are needed. The use of surgical solution of chlorinated soda is not advised immediately following the opening of the chest in acute empyema. A few days later, when the abscess has had time to become well walled off, and there is no danger of a bronchus communicating with the cavity, it may be tried. The last word in the treatment of empyema has not been said.

The Medical Profession in the War

Dr. Jere L. Crook, Jackson, Tenn.: Surgery's outstanding gains may be thus summed up: the Carrel-Dakin method of treating suppurating wounds; a revival of the use of débridement, first used extensively in the Napoleonic war; the treatment of shock caused by hemorrhage with blood transfusion by the citrate method, demonstrating the great superiority of blood over salt solution because the former has real sustaining power and the latter is temporary only because osmosis soon carries it out of the vessels; the paraffin treatment of burns; improved methods in the treatment of fractures and the use of the Thomas and Blake splints and the Balkan frame; early mobilization of injured joints; management of lung injuries; improvements in plastic surgery, and reeducation of the crippled.

Toxic, Nonexophthalmic Goiter

Dr. William D. Haggard, Nashville, Tenn.: This type of goiter is quite as dangerous, if not more so, than exophthalmic goiter, because the toxin seems to have a selective action on the heart, causing the so-called "goiter heart," thyrotoxic, instead of the mechanical "goiter heart" from pressure. It is more likely to be overlooked on account of the absence of exophthalmos. Many simple adenomas are prone to degenerate and produce toxic symptoms. An atoxic goiter may be of long duration before producing toxic symptoms. There is danger in administering iodin in a case of goiter of long standing. It may set up toxic and sometimes fatal symptoms. Toxic, nonexophthalmic goiter occurs in one out of four goiters that are not hyperplastic. Toxic goiter is not definitely improved by ligation. Operation for toxic goiter is quite as dangerous, if not more so, than in the exophthalmic type, owing to the condition of the patient. In my last series of 100 toxic cases, exclusive of the so-called simple goiter, two deaths occurred in thirty-three operations, and only two deaths in sixty-seven exophthalmic cases.

Nonhypertrophic Forms of Prostatic Obstructions

Drs. Bransford Lewis and Neil S. Moore, St. Louis: Nonhypertrophic obstruction at the bladder neck is a definite pathologic condition, appearing at any age, but most common in later life. Its diagnosis is practically easy, provided a systematic examination is made. Cystoscopy is most important. The treatment used is very simple and easy to do, if done properly. The risk is comparatively small and the results in appropriate cases have been very satisfactory.

Treatment of Acute Abdomen

Dr. J. P. Runyan, Little Rock, Ark.: It is a safe and sane procedure to operate early in acute suppurative peritonitis. After the stage of contamination comes, the stage of diffuse peritonitis, the Ochsner treatment offers the largest percentage of recoveries. The exceptions are perforation of duodenal ulcer and gunshot wounds of the hollow viscera. One should not be in too great a hurry to operate once the Ochsner treatment has been begun. Following the Ochsner treatment, operation should be done and Crile's principles applied in the after-treatment of all cases of septic peritonitis. When there are large areas of denuded peritoneum, from which may be expected a considerable flow of pus and serum, gauze drainage after the manner of Mikulicz or Price will give the most satisfactory results. In cases in which no peritoneal denudation has occurred, rubber tube drains will suffice.

Malignant Moles

Dr. H. H. Hazen, Washington, D. C.: Every acquired mole and every congenital mole that is liable to irritation should be removed, preferably by cautery. Whenever a mole begins to grow or to show signs of either irritation or ulceration it is an imperative sign for immediate extensive operative inference, preferably with the cautery, though this will often be too late. When numerous metastases have appeared, treatment is useless. In the cases in which involvement is only in the lymph nodes, extensive block dissection might occasionally effect a cure.

Radium in Gynecology

Dr. William C. Gewin, Birmingham, Ala.: Radium is the treatment of choice: in cases of menorrhagia of the menopause not associated with large fibroid tumors, and in which the possibility of carcinoma has been definitely eliminated; in cases of menorrhagia in patients between 35 and 40 years of age who have small sized mucous fibroid tumors with no demonstrable evidence of malignant conditions existing; in cases of myoma in which there is a contraindication to operation; in cases of menorrhagia in young persons who have resisted all medical treatment; in all cases with a malignant tendency, and in all operable cases after a complete surgical extirpation of all cancer possible as a prophylactic, and also to destroy such cancer cells as are not possible to be removed by the surgeon. In all inoperable cancers of the uterus, radium will relieve pain, eradicate the offensive odor from the discharge and stop the hemorrhage, and in many cases produce an anatomic and symptomatic cure when the patient seems to be moribund. Radium will render operable many cases that are inoperable. The use of radium is practically the only means of relief in cases of recurrent carcinoma of the uterus. In the use of radium it is very essential to have a thorough knowledge of the technic of its application and of its physical properties.

Value of Radium in the Treatment of Bladder Tumors

Dr. J. T. Geraghty, Baltimore: While benign and malignant papilloma and the early papillary carcinoma disappear under the influence of radium, the infiltrating types have proved very resistant to this agent. It is our procedure, therefore, when the infiltrating character of the growth has been determined and when the tumor is sufficiently localized to permit of complete removal, to carry out a radical resection. Following the removal of an infiltrating papillary carcinoma, cystoscopy should be done at an early date, as the not infrequent recurrences will yield promptly in many instances to radium, notwithstanding the resistance of the primary tumor. The use of radium has not diminished the tendency of bladder tumors to recur, recurrences being observed in about 30 per cent. of the cases treated. The recurrence, however, responds to radiation in most instances.

Pulmonary Syphilis

Dr. J. H. Gibbes, Columbia, S. C.: A chronic pulmonary disease, physically indistinguishable from the common types of

chronic pneumonitis, and producing a symptomatic picture similar to that of pulmonary tuberculosis, is not infrequently associated with a positive Wassermann reaction, and the favorable change in general and local conditions following antisyphilitic treatment is so striking as to lead one to the opinion that the syphilitic process is, at least, in part responsible for the pulmonary pathologic condition.

Ileocolitis

DR. N. C. WOMACK, Jackson, Miss.: Ileocolitis is mainly due to a gas-producing bacterium. In my opinion, this bacterium is an attenuated or malignant form of the colon bacillus. There is always an attending pyelitis in which the colon bacillus is found in great number. This pyelitis may antedate and certainly is the immediate complication of ileocolitis, and assumes the major rôle from the standpoint of the cause of death. In the treatment of ileocolitis, first attention should be paid to the kidney. Forced feeding of a selected carbohydrate diet with plenty of water should be given. All forms of rectal irrigation or alimentation should be interdicted on the ground that they not only do no good, but are distinctly harmful.

Maternal Feeding of Infants

DR. J. D. LOVE, Jacksonville, Fla.: The mother's dietary should consist of food generous in quantity, easily digested, and above all a food to which she is accustomed. A food that causes indigestion in the mother will cause trouble for her nursing baby. On the other hand, if a mother can handle well even the most indigestible food, her baby will rarely suffer in consequence. The gross appearance of breast milk furnishes an unreliable index as to its suitability for the baby. Before milk is pronounced as being too rich in quality, the presence or absence of colostrum bodies should have been determined. The mere fact that milk is scant in quantity furnishes no valid excuse for the withdrawal of the infant from the breast, but rather calls for supplemental feedings. In influencing the quality of breast milk, the maternal dietary, while of some importance, is a smaller factor than causes which operate through the medium of the mother's nervous system.

(To be continued)

CLINICAL CONGRESS OF AMERICAN COLLEGE OF SURGEONS

Ninth Annual Meeting, held in New York, Oct. 20-24, 1919

(Concluded from page 1722)

Brain Tumor

DR. HARVEY CUSHING, Boston: I have undertaken a statistical résumé of brain tumor cases (or suspected brain tumor cases) studied during a fifteen year period. Generally speaking, about 80 per cent. of these were tumors, of which half were verified by operation or necropsy. Another important question to settle is what are operative fatalities and what operative recoveries. Of twelve patients from whom tumors were removed, all died. Two patients entered the hospital within one week of each other. Both suffered from the rarest kind of brain tumor, a cholesteatoma, or mother-of-pearl tumor. From a superficial study of statistics one might suppose this tumor is common, but only six have been recorded in the literature. It is of the highest importance in these cases to agree on certain standards of classification so that surgeons may know they are speaking the same language as regards results.

DISCUSSION

DR. CHARLES H. FRAZIER, Philadelphia: I would like to refer to the use of callosal puncture in this field. In all pretentorial tumors the symptoms are due to distention of the ventricles which often brings matters to a fatal issue. The increased tension appears before localization is possible. I hoped that an opening could be made and drainage instituted in the corpus callosum so that in an inoperable growth, the life of the patient could be prolonged by this means. It was, however, of but transitory benefit. Lately I have combined callosal puncture with subtentorial decompression. My attention has also been attracted by the relation of chronic meningitis to brain tumors. An exploratory operation does not always exclude brain tumor, as the growth may be overlooked. In many cases, however, it seems that one is dealing with a preexisting meningitis. It is better not to wait to localize a tumor, but to operate early. There is clinical evidence that with the use of radium the tumor undergoes retrograde changes. In one such case, an enormous cerebellar tumor so adherent that its removal was impossible, the use of radium was combined with operative measures, and now five years later, there is no sign of recurrence. In another case, in which the patient was stuporous and bedridden from tumor at the cerebellopontile angle, a tube of radium was embedded and left in situ. The patient has recovered so far as to be able to return to work. As to operative mortality, I do not feel that when the patient dies of subsequent meningitis we should charge this up to operative mortality. The length of cure depends on the type of tumor. Endothelial growths are slow growing. Seven years would not be too long to wait for recurrence. All cases should be observed at least for five years.

DR. ALLEN B. KANAVEL, Chicago: Good results depend not only on the skill of the operator but also on the opportunity of early and correct diagnosis. The profession is too apt to believe that such symptoms as projectile vomiting, headache and choked disk are diagnostic. Progress will not begin until medical men learn that these are not the signs of brain tumor, but of its terminal stage. When this is learned we shall be able to cure, not merely relieve, the patients. Too often the case progresses far beyond the stage at which successful operation is possible. It is therefore necessary to arouse the interest of the profession to the diagnostic phase of the early stages. A nation-wide study must be inaugurated. Classified data should be collected and published. This would undoubtedly give rise to the performance of curative operations, instead of merely palliative ones.

DR. CHARLES A. ELSBERG, New York: Any one who has followed the history of brain surgery during the last fifteen years will feel that this field has not received the attention it deserves. The justification for specialization in neurologic surgery is now well recognized. The improvement in results in ten years is very striking. Mortality has dropped from 43 per cent. to 10 per cent. This is due to combined improvement in diagnosis and technic, and more skilful surgical judgment rather than to selection of cases. I saw one case of cholesteatoma in which three fourths of one hemisphere was involved. The growth was successfully removed and the patient recovered.

The Acute Abdomen

DR. JOHN B. DEAVER, Philadelphia: The acute abdomen occupies too prominent a place in mortality statistics. Among the reasons for this is the fact that too many untimely and unsuitable operations are performed in the treatment of this condition. This is in part due to the want of intimate knowledge of living surgical pathology, in part to too great a reliance on laboratory findings, and to the hesitancy to resort to radical measures in the hope that the symptoms may pass away under what is called conservative treatment. Occasionally, the acute abdomen is the result of conditions not recognized by even the most astute. The foolish belief that chronic ulcer, chronic gallbladder disease, chronic appendicitis, etc., can be cured by medicine, diet, rest, etc., is a perverted faith that courts disaster. Every abdominal wall which shows a penetrating wound, whatever its location and whatever the agent that inflicted the wound, should be opened. Similarly, severe blows on the abdomen, or a fall on the abdomen, or being crushed between wheels should bring to mind the possibility of one of the various subacute injuries that not infrequently occur. In these cases it is better to open the abdomen on suspicion and find nothing than to wait for an assured diagnosis and hemorrhage. The earlier the acute abdomen is seen and the earlier suitable surgical treatment is instituted the more favorable will be the prognosis. There are certain conditions of the abdomen in which surgery is not indicated.

Among these are acute dilatation of the stomach, acute postoperative gastric dilatation, acute gastro-enteritis simulating appendicitis, and conditions mistaken for the acute abdomen, such as pneumonia, diaphragmatic pleurisy, and the gastric crises of tabes. The physician and the laity should know the harmful possibilities of the purgative. The purge belongs in the same class, but is more deadly than morphin. In the acute abdomen amenable to surgery, early intervention is, of course, the best procedure. On general principles it may be said that in the acute abdomen with diffuse peritonitis, in the absence of a reliable history or a reasonably sure diagnosis and of a localized point, it is good judgment to defer operation, treating the patient by strict anatomic and physiologic rest. In circumscribed or localized peritoneal inflammation, operation is comparatively, if not entirely safe, with proper technic. The carefully elicited history is the point around which diagnosis should develop. I do not attach the same importance to the blood count that some surgeons do.

DISCUSSION

Dr. J. M. T. Finney, Baltimore: Two important things should be borne in mind: One is the diagnosis and the other the treatment. The main question is how to make the diagnosis. When that is reached, the rest is easy. Several cases have come under my observation in which the symptoms pointed to an acute abdominal condition, and in one of these an operation for appendicitis was performed. In the course of twenty-four hours these patients were found to have measles. Such occurrences serve to emphasize the difficulty of making a diagnosis of the acute abdomen, and the danger of mistaking something else for an abdominal crisis.

Dr. George E. Armstrong, Montreal, Que.: The difficulty of making a diagnosis in the presence of the acute traumatic abdomen may best be illustrated by citing several cases. Two cases have come under my observation in which after traumatic injury there was a quiescent period during which the patients manifested few symptoms, and yet at operation the small intestine was found to be completely severed and the ends of the intestine closed off by the local reflexes so that there was no leakage. It may be said that after certain traumatic injuries to the abdomen there is frequently a quiescent period of from twelve to twenty-four hours during which the surgeon and the patient may decide what is to be done. I would emphasize the evil of purgatives. The inadvisability of administering morphin is also to be emphasized. There are cases in which it is well, when the symptoms are few, to keep cool and wait.

Dr. Stuart McGuire, Richmond, Va.: It is necessary to make clear that the acute abdomen is not always surgical and that sometimes when it is surgical it has reached a stage when operation would be unwise. In some cases by postponement of operation and treatment by palliative measures a desperate case became a safe risk. When in doubt, I am inclined to wait. I agree thoroughly with the condemnation of the purge, but I do not think morphin has been given the credit it deserves. It should not be given while the diagnosis is obscure; but when the diagnosis is once made, the patient should have the relief from pain that morphin affords. I believe in the Fowler-Ochsner-Murphy treatment.

Beriberi at Bahia.—In a recent paper published by Dr. Clementino Fraga of Bahia, he discusses the occurrence of beriberi at Bahia during recent years, especially as shown by the statistics of the insane asylum and the state penitentiary. In the former, there were in 1902, 34 deaths caused by beriberi, 32 in 1903, 58 in 1904, while more recently there were 16 deaths in 1914, 4 in 1915 and 8 during the year 1917. In the penitentiary there were outbreaks of beriberi in the years 1897, 1900, 1901, 1902, 1903 and 1908; in the latter year there were 112 cases with 62 deaths. In the marine hospital which is no longer in existence, there were in the years 1881-1882, 432 cases, practically all landed from warships. In the hospital of Santa Izabel for the last fifty years there has been an annual average of 18.48 cases making a total of 924 cases.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Public Health, Concord, N. H.

November, 1919, **9**, No. 11

Supreme National Need: Coordination and Enlargement of Federal Health Activities. W. S. Rankin, Raleigh, N. C.—p. 817.
The Outdoor Pool. Obvious Need for Clean Pools. C. V. Craster, Newark, N. J.—p. 823.
What Is the Matter with Public Health Today? H. W. Hill, St. Paul.—p. 827.
Personality in Public Health. J. A. Tobey, Washington, D. C.—p. 831.
Influenza and Pneumonia. B. S. Maloy, Chicago.—p. 835.
Public Health Work in India. I. Caste System and the Sanitary Problem. H. N. Jenks, Berkeley, Calif.—p. 838.
Characteristics of the Colon Type of Bacteria Found in Feces. C. A. Darling, Meadville, Pa.—p. 844.
*Influenzal Pneumonia as Influenced by Dish Washing in Three Hundred and Seventy Public Institutions. J. G. Cumming, Berkeley, Calif.—p. 849.
Publicity and Campaign Against Venereal Disease. R. H. Everett, New York.—p. 854.
Critical Study of Some Methods Proposed for Liberation of Formaldehyd Gas for Fumigation Purposes. E. K. Kline, Toledo.—p. 859.

Influenzal Pneumonia and Dish Washing.—Cummings believes that transmission of the potentially dangerous group of pneumonia producing organisms, incident to promiscuous messing in the army, in public institutions, in public eating places and in the home, can be prevented largely by the disinfection of eating utensils with scalding water. The universal application of the principle of proper eating utensil disinfection will reduce enormously the prevalence of all suptum borne infections. As is shown in the institutional population, the influenza case rate was reduced by 66 per cent. and the mortality by 55 per cent. through the use of machine washed dishes. It is believed that a further reduction in these rates would have occurred had the full efficiency of all mechanical dish washers been utilized by the use of boiling water. This principle applies to public eating places, as well as to public institutions, and with equal force to the scalding of eating utensils in the private family.

American Journal of Syphilis, St. Louis

October, 1919, **3**, No. 4

*Standardization of Wassermann Reaction. V. Preservation of Complement Serum. J. A. Kolmer, T. Matsunami and M. E. Trist, Philadelphia.—p. 513.
*Id. VI. Human Versus Guinea-Pig Complement in Serum Diagnosis of Syphilis. J. A. Kolmer and A. M. Flick, Philadelphia.—p. 541.
Early Asymptomatic Neurosyphilis. Report of Cases. J. V. Klauder, Philadelphia.—p. 559.
*Congenital Syphilis in Orthopedic Clinics. P. W. Roberts, New York.—p. 587.
*Chronic Diarrhea Probably Due to Syphilis. H. Liser, San Francisco.—p. 594.
Incidence of Syphilis. A. B. Day and W. McNitt, St. Louis.—p. 595.
Delaying Early Diagnosis of Syphilis (Chancre): Dangers and How to Avoid Them. E. W. Abramowitz, New York.—p. 607.
Syphilis Among Insane with Special Reference to Hecht-Weinberg-Gradwohl Test. T. B. Christian, Norristown, Pa.—p. 613.
*Syphilitic and Arsenical Jaundice. G. O. Scott and G. H. J. Pearson, R. A. M. C.—p. 628.
*Four Fatalities Following Use of Arsphenamin (Salvarsan). W. B. Blanton, Richmond, Va.—p. 648.
Intensive Treatment of Women with Neodiarsenol at Hospital Jail, San Juan, P. R. H. Goodman, New York.—p. 661.
*Treatment of Late Syphilis. H. H. Hazen, Washington, D. C.—p. 665.
Treatment of Syphilis of Central Nervous System. S. T. Nicholson, Jr., Clifton Springs, N. Y.—p. 669.

Wassermann Reaction: Preservation of Complement Serum.—Of the sixteen methods studies by Kolmer and his associates, preservation with sodium chlorid at a low temperature yielded the best results. When complement is required in dilution of 1:10, the methods of Thompson and Neill are satisfactory for preserving guinea-pig complement for a period of two weeks, provided the serum is kept at a low temperature and preferably not above 4 C. When complement is required in dilution of 1:20 the addition of 0.17 gm. sodium chlorid to each cubic centimeter of serum and keeping at a low temperature preserves the complement for about three weeks.

Wassermann Reaction: Human Versus Guinea-Pig Complement.—These studies have shown that from 2 to 10 per cent. of human serums do not contain sufficient complement, natural hemolysin or both for the conduct of these special tests. Human complement is not as satisfactory as guinea-pig complement for the conduct of tests employing heated serum and spinal fluids. The advantages of tests employing human complement are (1) greater delicacy; (2) guinea-pigs are not required, and (3) sheep are not required if an anti-human system is employed. The disadvantages are (1) falsely positive reactions may occur; (2) falsely negative reactions may occur; (3) the serums must be fresh; (4) unsatisfactory with heated serums and spinal fluids; (5) complement, natural hemolysin or both may be absent from serums and (6) isoagglutinins may interfere in tests employing an antihuman hemolytic system. Of the special tests, those of Thompson and Bartlett and O'Shansky proved most reliable.

Congenital Syphilis in Orthopedic Clinics.—Roberts is convinced that many syphilitic infections which find their way into orthopedic clinics pass through unrecognized, first because the tradition that nearly all chronic destructive lesions of the spine and large joints are tuberculous has been accepted without question, and second, because the far reaching distribution of congenital syphilis and its potential dangers has been ignored.

Chronic Diarrhea Probably Due to Syphilis.—Liser reports a case of chronic diarrhea of one year's duration in which a cure was effected by arsphenamin and mercury. Syphilis as the cause seems reasonable, since malignancy, tuberculosis, hyperthyroidism, achylia and amebic dysentery can be excluded. No therapeutic measures of any kind were employed, except arsphenamin and mercury.

Syphilitic and Arsenical Jaundice.—Jaundice occurring in the course of an attack of syphilis is divided into two groups by Scott and Pearson: first, the jaundice that occurs in untreated cases of syphilis and which is due to an invasion of the liver by the *Spirochaeta pallida*, and second, that which occurs during or subsequent to the treatment of syphilis by arsphenamin, or its substitutes, and which may be due to the organism, the drug or a combination of both. Among 2,243 patients treated for syphilis Scott and Pearson found two cases which showed unmistakable evidence of belonging to the first group and thirty-nine to the second group.

Four Fatalities Following Use of Arsphenamin.—The four fatalities reported by Blanton followed an intensive course of arsphenamin treatment consisting of from four to six intravenous doses. There was an average interval of four days between injections; from 0.4 to 0.6 gm. arsphenamin were given at a time. Two days in three cases, and three days in the other case intervened between the time of the last treatment and the onset of the illness. The time elapsing between the admission to the hospital and death was two days in three cases and one day in the other. A striking similarity in symptoms, as well as in postmortem findings existed in all four cases. After a symptomless latent period of about two days, the development of sudden and profound coma was characteristic and dominated the clinical picture so that it was difficult to elicit any focalizing signs at all. There were no cranial nerve palsies. The pupils were dilated in two cases; in two they were unaffected. During the last twenty-four hours of life the reflexes disappeared in all four cases. Two patients had convulsions. Cheyne-Stokes breathing was present in all cases and death was apparently due to failure of the respiratory center. Pathologic study of the brains of these four cases showed similar lesions. These consisted in minute hemorrhages, scattered through and confined to the basal nuclei and that part of the cerebrum bounding the lateral ventricles. These were associated with a softening confined to this locality and seen easiest on gross examination. Cerebral congestion and edema were marked. Increase of cerebrospinal fluid was not a conspicuous finding. In only one case was there a slight fatty degeneration of the liver. In Blanton's opinion the cause of these mishaps is undoubtedly to be found in the toxic by-products of arsphenamin synthesis, the exact nature of which is unknown.

Treatment of Late Syphilis.—Hazen says it is extremely improbable whether any case of late syphilis has ever been cured. Any patient with an active syphilitic process must have sufficient treatment to render the lesions inactive and the blood reaction negative. A small amount of treatment is dangerous, neurorecidives being especially liable to develop after one or two doses of arsphenamin. The condition of the heart and of the large vessels must be watched just as well as the nervous system.

Boston Medical and Surgical Journal

Nov. 20, 1919, **181**, No. 21

Necessity of Additional Accommodations for Insane of Boston. J. V. May, Boston.—p. 601.
Neuropsychiatry in Army Camps. G. E. McPherson, Medfield, Mass. —p. 606.
Relation of Oral Infection to Systemic Disease. A. J. Leary, Boston. —p. 611.
Improvement of Obstetrics. S. Rushmore and A. K. Paine, Boston. —p. 615.
*Preliminary Ligation in Hyperthyroidism. F. H. Lahey, Boston. —p. 618.

Preliminary Ligation in Hyperthyroidism.—Personal experience has convinced Lahey that preliminary pole ligation is the one definite factor which can be said to make the final operation of partial thyroidectomy less hazardous. The operation is based on sound principles, produces definite effects and consists of a clean-cut procedure.

Bulletin of Johns Hopkins Hospital, Baltimore

November, 1919, **30**, No. 345

*Fate of Bacteria Introduced into Upper Air Passages. A. L. Bloomfield, Baltimore.—p. 317.
Influenza Bacillus in Paranasal Sinus Infections. S. J. Crowe and W. S. Thacker-Neville, Baltimore.—p. 322.
*Meningococcus Pneumonia. I. Occurrence of Influenza Pneumonia in Which Diplococcus Intracellularis Meningitidis Was Isolated. M. L. Holm, Lansing, Mich., and W. C. Davison, Baltimore.—p. 324.
Id. II. Epidemiology of Influenzal Pneumonia in Which Diplococcus Intracellularis Meningitidis Was Isolated. W. C. Davison, Baltimore, M. L. Holm, Lansing, Mich., and R. V. B. Emmons, Hamble, England.—p. 329.
*Occurrence of Pfeiffer Bacillus in Measles. A. W. Sellards, and E. Sturm, U. S. Army.—p. 331.
Reaction of Leukocytes in Epidemic Influenza. B. Douglas, Baltimore. —p. 338.

Fate of Bacteria Introduced into Upper Air Passages.—The general result of Bloomfield's experiments indicates that even after a short period of time it is usually impossible to recover *Sarcina lutea* swabbed in large amounts on the tongue, nasal mucosa, or into the crypts of the tonsils, indicating the remarkable efficiency of the mechanism present in the upper air passages for disposing of this organism. The mouth bacteria play little, if any part, but the saliva and mouth secretions exert a prompt and marked bactericidal effect.

Meningococcus Pneumonia.—From the fact that meningococci rank third among the bacteria found most frequently in the lungs at necropsy in cases of pneumonia being exceeded only by pneumococci and *B. influenzae*, Holm and Davidson conclude that meningococci were an important factor in the causation of influenzal pneumonia at Camp Coetquidon from Sept. 1, 1918, to Feb. 15, 1919. The meningococci present in the lungs in cases of meningococcus pneumonia were essentially the same type of organisms as those found in the spinal fluids in cases of epidemic cerebrospinal meningitis. Cases of meningococcus pneumonia may arise from contact with cases of meningococcus cerebrospinal meningitis and vice versa. The meningococci may produce either bronchopneumonia or lobar pneumonia.

Occurrence of Pfeiffer Bacillus in Measles.—The examination of a group of measles cases occurring a few weeks after an epidemic of influenza showed the presence of an organism indistinguishable from the Pfeiffer bacillus in twenty-five of thirty-one cases. This organism was obtained readily from the sputum and with little difficulty from the conjunctivae. The Pfeiffer organism was not obtained from the blood stream nor from the excised skin lesion. With the

subsidence of the active symptoms of measles these microorganisms disappeared rather rapidly in about three fourths of the cases. The occurrence of the Pfeiffer bacillus both in measles and in influenza constitutes suggestive evidence against its etiologic relationship in either disease.

California State Journal of Medicine, San Francisco

November, 1919, **17**, No. 11

Plaster Methods of Treating Muscle Contractures Following Wounds. G. J. McChesney, San Francisco.—p. 395.
Case of Leptomeningitis of Otitic Origin. G. S. Wells, Santa Barbara.—p. 398.
*Possible Relationship of Dental Abscesses and Toxemias of Pregnancy. F. M. Loomis, Oakland, Calif.—p. 399.
Pathologic Indications for Cholecystectomy. A. S. Lobingier, Los Angeles.—p. 401.
Obstetric Society of San Francisco: A Reminiscence. D. W. Montgomery, San Francisco.—p. 405.
Abdominal War Wounds. R. Smith, Los Angeles.—p. 406.

Relationship of Dental Abscesses and Toxemias of Pregnancy.—Eight cases are reported by Loomis in which he is convinced that all the evidence is at hand to connect abscesses of the teeth with manifestations of toxemias of pregnancy. He suggests that this relationship be borne in mind and that extraction of abscessed teeth is indicated.

Canadian Medical Association Journal, Toronto

November, 1919, **9**, No. 11

*Significance of Small Amount of Sugar in Urine. L. Hamman, Baltimore.—p. 961.
After Effects of Chlorin Gas Poisoning. J. C. Meakins and J. G. Priestley, Montreal.—p. 968.
Postural Albuminuria. M. Mackay, Sherbrooke.—p. 975.
Acidosis. A. D. Blackader, Montreal.—p. 978.
Surgical Efficiency in Army Medical Service. H. A. Bruce, Toronto.—p. 988.
*Tick Caused Paralysis. J. L. Todd, Winnipeg.—p. 994.
Town Planning and Civic Authorities. J. E. Laberge, Montreal.—p. 997.
Housing and Town Planning. E. Nadeau, Quebec.—p. 1003.
*Internal Hydrocephalus and Xanthochromia of Spinal Fluid. A. H. Gordon, Montreal.—p. 1005.
State Medicine and Rehabilitation. J. L. Biggar, Toronto.—p. 1013.
Comparison of Kolmer's Modification of Original Wassermann Test and No. 4 Method as Recommended by Medical Research Committee. N. O. Thomas and K. M. B. Simon, Granville.—p. 1016.
Rupture of Left Cardiac Ventricle. G. B. Murphy, Vancouver.—p. 1019.

Significance of Small Amount of Sugar in Urine.—If with hypertension and chronic nephritis there is but an occasional trace of sugar in the urine and the blood sugar is not unduly high, then, Hamman says, the disordered carbohydrate metabolism must be subordinated to the renal or vascular condition. If there is marked glycosuria and the blood sugar is unusually high, then the diabetes must be emphasized. The clinical history is of importance. Patients past middle life with mild diabetes often gradually develop nephritis and hypertension, so that finally the renal and vascular conditions assume the prominent position in the clinical picture. On the other hand, Hamman has observed patients with hypertension over a number of years and has seen them gradually develop glycosuria and finally a definite intolerance for carbohydrates.

Tick Caused Paralysis.—From the evidence accumulated, Todd says it seems certain that ticks may cause paralysis in human beings, especially in children. In rural districts, physicians who examine cases of progressive and sudden paralysis should make it a practice to search for a tick. They are most often found about the back of the head and neck. If a tick is found, it should be removed carefully and be sent, living if possible, to a laboratory for examination and identification. If the tick's head be torn off and left fixed to the skin, the bite may become infected and an ulcer be produced; some of the local infections which have been reported to follow tick bite were exceptionally severe. Practitioners who meet with cases where symptoms are associated with the presence of ticks should record their experience.

Internal Hydrocephalus and Xanthochromia of Spinal Fluid.—The syndrome of Froin consists of (*a*) a spinal fluid of yellow color (xanthochromia); (*b*) which coagulates en masse and (*c*) shows an abundant lymphocytosis. The syndrome of Nonne consists of a spinal fluid showing (*a*) marked increase of globulin, (*b*) without increase of cellular elements. The above features may be complete or partial, and variations may exist in the several factors. The syndrome of Froin, or xanthochromia alone, usually indicates an isolation of one portion of the subarachnoid space from the rest by tumor, adhesions, etc. This separation is usually found at the lower levels of the cord. Internal hydrocephalus may be associated with separation of the spinal from the cerebral subarachnoid space either by adhesions of the brain stem to the tentorium, or by hernia of the distended brain into the foramen magnum. In the case reported by Gordon the possible explanation is (1) basal meningitis (meningococcus or *B. influenzae*); (2) partial recovery; (3) obstruction of foramina in the roof of the fourth ventricle by meningitis; (4) development of a noncommunicating hydrocephalus; (5) hernia of the brain into the foramen magnum; (6) separation and sacculation of the spinal subarachnoid space; (7) development of partial Froin's syndrome lies in the separation of the sacculated portion of the subarachnoid space from the choroid plexus through which normally it is filtered and a reversion of its contents to a simple lymphoid material, yellowish, coagulating and cellular.

Journal of Abnormal Psychology, Boston

April-June, 1919, **14**, Nos. 1 and 2

Mechanism of War Neuroses. S. I. Schwab, St. Louis.—p. 1.
Neuropsychiatric Problems at Front During Combat. J. H. W. Rhein, Philadelphia.—p. 9.
Emotions and Their Mechanism in Warfare. T. A. Williams, Washington, D. C.—p. 15.
Management of Psychoneuroses in Canadian Army. C. Russel, C. A. M. C.—p. 27.
Revivals; Sex and Holy Ghost. T. Schroeder.—p. 34.
Psychopathologist and His Responsibility. C. M. Campbell, Baltimore.—p. 48.
Cyclothymic Fugues; Fugues Associated with Manic Depressive Psychosis. Report of Case. K. A. Menninger, Topeka, Kan.—p. 54.
Shelley as Myth Maker. E. C. Taylor.—p. 64.
Source and Aim of Human Progress. B. Sidis, Boston.—p. 91.

Journal of Experimental Medicine, Baltimore

Nov. 1, 1919, **30**, No. 5

*Chemotherapy of Trypanosome and Spirochete Infections. Chemistry of N-Phenylglycineamide-*p*-Arsonic Acid. W. A. Jacobs and M. Heidelberger, New York.—p. 411.
Id. Toxic Action. W. H. Brown and L. Pearce, New York.—p. 417.
*Id. Therapeutic Action in Experimental Trypanosomiasis of Mice, Rats and Guinea-Pigs. L. Pearce and W. H. Brown, New York.—p. 437.
Id. Therapeutic Action in Experimental Trypanosomiasis of Rabbits. L. Pearce and W. H. Brown, New York.—p. 455.
*Id. Action on Spirochete Infections. W. H. Brown and L. Pearce, New York.—p. 483.
Occurrence of Bacillus Influenza in Normal Throat. A. I. Winchell and E. G. Stillman, New York.—p. 497.
*Pathologic Changes in Testes in Epidemic Pneumonia. R. G. Mills, Baltimore.—p. 505.

Trypanosome and Spirochete Infections: N-Phenylglycineamide-p-Arsonic Acid.—Jacobs and Heidleberger have been engaged in the synthesis of certain new types of organic arsenic compounds for the treatment of experimental trypanosome and spirochete infections. A number of substances have been prepared which have given interesting experimental results. However, those obtained with one in particular, the sodium salt of N-phenylglycineamide-*p*-arsonic acid were such as to demand special attention. The simplicity of this compound, the ease of preparing it, its relatively inexpensive character, stability and solubility, and its favorable biologic behavior, warrant further study. It readily yields a colorless, crystalline sodium salt which is extremely easily soluble in water, forming neutral solutions, which are perfectly stable. In fact, a 10 per cent. solution may be boiled a reasonable length of time without appreciable cleavage of ammonia or arsenic. The materials required and the method of preparation are described in detail.

Therapeutic Action of N-Phenylglycineamide-p-Arsonic Acid in Experimental Trypanosomiasis.—This acid is an agent of marked therapeutic action in the treatment of experimental trypanosomiasis of mice, rats and guinea-pigs. It possesses an average curative range of from 0.2 to 0.3 gm.

per kilogram of body weight of the sodium salt against a twenty-four hour infection in mice and rats produced by several species of pathogenic trypanosomes. Since the lethal dose for mice is from 2 to 2.25 gm. and for rats 0.75 gm. per kilogram of body weight, the curative ratios are 1:8 and 1:3, respectively. The curative dose for guinea-pigs is 0.15 gm. per kilogram of body weight, thus giving a curative ratio of 1:10. The trypanocidal activity of this compound is relatively rapid in all three animal species for the peripheral blood is cleared of organisms within twenty-four hours after its administration, and in addition, the lower limits of the curative range are comparatively sharply defined. Intraperitoneal, intravenous and subcutaneous routes of administration for all practical purposes may be considered equally efficacious in *Tr. brucei* infections of mice both as regards the speed of action of the drug and the average curative range. The administration of the drug in therapeutic amounts in all three animal species is not followed by manifestations of organic or functional injury but, on the contrary, the general physical condition of the treated animal shows an immediate and continued marked improvement. The therapeutic activity in trypanosomiasis of mice, rats and guinea-pigs, as evidenced by the relative speed and sharpness of action, together with the curative ratio as expressed in fractions of the minimum lethal dose and the absence of organic injury or functional disturbance following therapeutic doses, are significant and characteristic features of the amide of N-phenylglycine-*p*-arsonic acid.

Therapeutic results with the amide of *N*-phenylglycine-*p*-arsonic acid were obtained in rabbits which showed well marked clinical signs of a definitely established disease, and in many instances the infection was extremely advanced and of prolonged duration.

Action of N-Phenylglycineamide-p-Arsonic Acid on Spirochete Infections.—This acid is capable of exercising a very definite effect on the course of infections produced by spirochetes of the recurrens group and by *Spirochaeta pallida*. It is difficult to say, however, just how these effects should be interpreted. In the case of the blood spirochetes, the infection is ameliorated, and even though the spirochetes are not immediately destroyed, the infection is frequently brought to a termination which leaves the animal in a condition not unlike that produced by more powerful spirocheticidal agents. That is, the infecting organisms are either affected in such a way that they eventually die off or are destroyed by the host in such a way that no lasting immunity is developed in consequence of their destruction. With either group of organisms, therefore, N-phenylglycineamide-*p*-arsonic acid appears to act in a manner somewhat different from that of the usual spirocheticidal agents. While it does possess a considerable degree of spirocheticidal action, its chief effect is seen in the peculiar manner in which it modifies or controls the course of these infections.

Changes in Testes in Pneumonia.—Sixty cases were studied by Mills. Pneumonia was the cause of death in every instance, but in some cases it was the sole factor, while in others it was preceded by measles or epidemic influenza. The testicular changes in pneumonia are without clinical manifestations, are nonspecific, focal in character, independent of the infecting organisms or the antecedent disease, and vary in severity directly with the total length of the illness. The process is a continuous one, divisible into stages in which the following features are recognizable: (1) cessation of spermatogenesis; (2) degeneration of preformed spermatocytes, spermatids and spermatozoa; (3) desquamation of altered cells and fragments of the same; (4) formation of giant cells in the tubule walls with subsequent liberation into the lumen; (5) disappearance of all desquamated cells in all those derived from the spermatogonia by mitosis; (6) in some instances thickening of the hyaline layer of the basement membrane. The hemolytic streptococcus produced more extensive changes, both epithelial and interstitial, in primary pneumonia occurring during the measles epidemic than when pneumonia followed as a secondary infection; in the latter cases the pulmonary complications covered a relatively shorter period. Measles and epidemic influenza had little apparent effect on the testes, except that the former caused mild inhibition of spermatogenesis; evidence regarding the latter is inconclusive. The Pfeiffer bacillus was always associated with other organisms, in primary infections and in those following measles. It occurred alone in a few cases after epidemic influenza, but the testicular lesion was not distinctive. The pneumococcus when alone in primary infections or after an epidemic disease produced a uniformly mild picture which was not intensified when associated with the influenza bacillus. Giant cells were much more frequent after influenzal pneumonia, regardless of its cause and were associated with large numbers of other desquamated cells. They are formed in the walls of tubules by futile mitotic effort and incomplete protoplasmic separation, the abnormality of the process being further suggested by the early severing of cytoplasmic attachments and rapid desquamation.

Kansas Medical Society Journal, Topeka

November, 1919, **19**, No. 11

Postoperative Use of Radiant Heat. L. A. Sutter, Wichita.—p. 265.
Personal Experience with Gas in St. Mihiel and Argonne-Meuse Drives. R. H. Meade, Kansas City, Mo.—p. 267.
Treatment of Mental Diseases. K. A. Menninger, Topeka.—p. 271.

New York Medical Journal

Oct. 4, 1919, **110**, No. 14

"The Jest": The Destruction Wrought by Hate. S. E. Jelliffe and L. Brink, New York.—p. 573.
*Pneumonia and Empyema at Camp Dix. S. S. Leopold, Philadelphia.—p. 578.
*Multiple Neuritis of Toxic-Infectious Origin. A. Gordon, Philadelphia.—p. 581.
Pleural Symphysis in Children. C. G. Cumston, Geneva, Switzerland.—p. 583.

Empyema at Camp Dix.—According to Leopold, the patients at Camp Dix who were suffering from empyema due to *Streptococcus hemolyticus* were operated on immediately on finding the organism in the pleural fluid. The operations were performed under local anesthesia. The mortality in this group of cases was 54 per cent. The average mortality among these cases in the national army cantonments was 30.2 per cent. The highest mortality reported was 84 per cent. in a series of eighty-five cases.

Multiple Neuritis of Toxic Infectious Origin.—Gordon analyzes seventeen cases. They followed infectious diseases: pneumonia, three cases; typhoid, five cases; measles, two cases; influenza, two cases, puerperal states, three cases. The author suggests that hepatic insufficiency might be responsible for the trouble. Gordon says that however plausible the infectious theory of multiple neuritis may be, hepatic insufficiency seems to form a strong basis even if the disease develops in the course of infectious processes. Moreover the clinical picture in such cases presents certain special features and with such a uniformity that polyneuritis with a hepatic etiology may be considered as a special entity.

Philippine Journal of Science, Manila

April, 1919, **14**, No. 4

New or Noteworthy Philippine Plants, XV. E. D. Merrill, Manila.—p. 365.

Surgery, Gynecology and Obstetrics, Chicago

November, 1919, **29**, No. 5

Snapping Hip; Report of Cases. L. Mayer, New York.—p. 425.
Penetrating Chest Wounds. J. J. Lebowitz and W. H. Nadler, Chicago.—p. 429.
Gunshot Injuries of Lung and Chest. V. C. David and E. M. Miller, Chicago.—p. 435.
*Resection of Lung for Posttonsillectomy Abscess. H. Lilienthal, New York.—p. 443.
Surgical Pathology of Ranula. P. G. Skillern, Jr., Philadelphia.—p. 447.
*Estimation of Fats, Cholesterol and Sugar in Blood of Thirty Pregnant Women. H. Schiller, Chicago.—p. 451.
Technic of Gallbladder and Common Duct Surgery. H. M. Richter, Chicago.—p. 455.
*Gangrenous Appendicitis Coincident with Labor. Report of Case. J. F. Grattan, New York.—p. 457.
*Prognosis in Hyperthyroidism. A. E. Hertzler, Kansas City.—p. 463.
*Surgical Treatment of Exophthalmic and Thyrotoxic Goiter with Special Reference to Bilateral Resection. N. M. MacLean, Winnipeg, Manitoba.—p. 475.

*Large Vesical Calculi. Report of Case. E. C. Smith, Quebec.—p. 481.
Uterus Bicornis Unicollis with Two Ova Implanted in One Horn and a Fibroid in the Other. E. L. Cornell and W. C. Earle, Chicago. —p. 485.
Intussusception of Jejunum Associated with Two Pedicled Fibroadenomata. Report of Case. R. J. E. Oden, Chicago.—p. 489.
Surgical Treatment of Infections of Knee-Joint. H. W. Orr, Lincoln, Neb.—p. 492.
Internal Piles. W. E. Miles, London, England.—p. 497.
*Permanent Cure of Inguinal and Femoral Hernia. G. P. Laroque, Richmond, Va.—p. 507.
*Suspension of Uterus with Strip of Fascia Lata in Treatment of Prolapse. L. Freeman, Denver.—p. 511.
*Fenestrated Band in Fractures of Bone. A. W. Collins, San Francisco. —p. 513.
Control of Hemorrhage in Tonsillectomies. W. R. Parkes, Evanston, Ill.—p. 515.
*Patella Splint. J. J. Rectenwald, Pittsburgh.—p. 516.

Lung Abscess Following Tonsillectomy.—About a week after removal of the tonsils Lilienthal's patient began to cough and expectorate foul sputum and occasionally blood. For days and even weeks at a time the patient felt fairly well and coughed but little. Then there would be an attack of fever, hemorrhage, emptying of the abscess, and much coughing with the discharge of large quantities of fetid pus. In the beginning of the illness, the pneumococcus was found in the sputum and autogenous vaccines were given with no apparent improvement; indeed, there was some hemoptysis after each injection. The roentgenogram showed that in the right chest, there was a cavity in the midclavicular line; an area of infiltration from the seventh to the ninth ribs (middle lobe) with a cavity about the size of a walnut; infiltration about 4 inches vertical by 3 inches horizontal. There was much infiltration into the lung tissue outside the zone of inflammatory reaction. The patient's condition went from bad to worse and finally Lilienthal removed the lower, middle and part of the upper lobe of the right lung. The man returned to his work, that of hospital secretary, July 16, 1917, exactly four months after his operation. When clothed, his figure looks symmetrical but there is considerable contraction of the right chest. The wound remained open for nearly a year longer, then gradually closed, but reopened once or twice, and finally healed soundly.

Fats, Cholesterol, Sugar in Blood of Pregnant Women.—Schiller claims that there is no hyperglycemia in the later months of pregnancy or in the first two weeks after pregnancy. Glycosuria and alimentary glycosuria during this period can be explained by the activity of the glands of internal secretion or as a renal hyperfunction. Hyperlipemia in pregnancy is in reality for the most part a hyperlipoidemia. There is no parallelism between cholesteremia and hyperglycemia in pregnancy. The etiology of this condition is as yet not established. It seems that the endocrine glands are to be looked on as an important factor.

Gangrenous Appendicitis and Labor.—Grattan cites the case of a young, vigorous woman, primipara, with a negative history, normal obstetric outlook and no complaints, in whom there was the simultaneous occurrence of early labor pains with abdominal symptoms, ending in the diagnosis and operation for appendicitis. A totally gangrenous appendix, filled with pus and about to perforate was removed. This was followed by peritonitis of a seropurulent character. A normally formed and developed full term baby and placenta were delivered. A state of apnea in the baby, lasting forty-five minutes, with good pulse was followed by a normal period of three hours. Apnea recurred with normal periods between, finally ending in failure of the baby's heart action and death, seven and one-half hours after delivery. The apnea was probably toxic from the pus in the mother's appendix. Then ensued postoperative complications in the mother, i. e., cardiac and renal failure, almost of fatal termination and undoubtedly of toxic origin from the appendix. A subsequent jaundice was an evidence of the effect of the toxemia on the liver function. Complete recovery followed without residual pelvic exudate and with cardiac, renal or other residue of the complications and without invalidism of any kind.

Prognosis in Hyperthyroidism.—Hertzler points out that in hyperthyroidism the general tendency is toward recovery and that many patients do recover spontaneously. Recovery may be expedited by judicious operations. The time for operation must be selected carefully and the operation chosen must be commensurate with the resistance of the patient. Above all, the operator must ever hold the fact before himself that his operations must be without mortality lest his therapeutic endeavors prove a greater menace than the disease. The young man is too apt to assume that whatever good follows his efforts must have come because of such efforts, and if disaster is averted, it must be because of his efforts.

Exophthalmic and Thyrotoxic Goiter.—MacLean has done bilateral resection in thirty-one cases of true exophthalmic goiter or in cases with positive symptoms of hyperthyroidism where both lobes of the thyroid were enlarged. There was no operative mortality in this series.

Large Vesical Calculi.—The calculus in Smith's case weighed 38.5 ounces (1,155 gm.) in the moist state. This did not include any of the flakes and fragments which were lost during the removal and which would have at least brought the total weight up to 40 ounces. It was ovoid, light brown in color, smooth and flaked easily. It measured 9.6 by 14.2 centimeters with a circumference of 36 centimeters. Its cut surface resembled the cross section of a tree, being built up of numerous, concentric, yellowish white lamellae about twenty in number. It was apparently of the same composition throughout, no distinct nucleus or foreign body being present. Chemical analysis showed urates, calcium oxalate and earthy phosphates. The urates were the predominating salts. Mucin was also present.

Operation for Inguinal and Femoral Hernia.—The method described by LaRoque is offered as a modification of the standard operative procedures employed for the cure of inguinal and femoral hernia. The entire operation is "open." The general peritoneal cavity is opened well above the hernia and exploration is made carefully. Enucleation and removal of the entire sac, including the redundant peritoneum in the region to a point well above the neck of the sac is surely and safely accomplished with the minimum amount of trauma to the cord and other structures in the region. The internal ring and beginning of the spermatic cord can be easily and adequately lifted upward and outward, thus certainly obliterating the internal ring and actually transplanting the proximal portion of the cord at its origin (both of which procedures are useful) rather than merely shifting only the middle or distal portion of the cord to an apparently changed location (the needfulness and permanency of which is questionable). Hernias which have been previously incompletely removed and in which the canal has been properly sutured (so-called recurrences) with a portion of the original sac and its neck remaining, may be cured completely with the least trauma to the cicatricial tissue following the previous operation and without the necessity of reopening a partially or completely obliterated canal.

Suspension with Fascia Lata in Prolapse of Uterus.—Freeman secures access to the uterus in the usual way. If the patient is still within the childbearing period, she must be sterilized, best by ligation of the tubes with silk, dividing them, and perhaps folding the severed ends on themselves. A strip of fascia lata, about 6 inches in length and three-fourths inch in width, is then obtained from the outer side of one of the thighs. The uterus is held firmly while a closed pair of small, sharp pointed, curved hemostatic forceps is plunged from one side to the other directly through the substance of the uterus close beneath the peritoneum covering the fundus, but not penetrating into the cavity. The forceps should be entered just internal to the attachment of one of the tubes and brought out at a corresponding point on the opposite side, although if the organ is large it may be well to tunnel it somewhat more anteriorly in order to prevent undue pressure on the bladder when the uterus is suspended from the tendons of the recti muscles The strip of fascia is then dragged through so that its center rests in the middle of the tunnel and its loose ends project from either side. Catgut stitches are inserted to close the openings of the tunnel, thus preventing oozing and holding the

fascia in place. The ends of the fascia are secured around the tendinous insertions of therecti muscles in order to bind the fundus of the uterus securely and closely to the anterior abdominal wall. This is accomplished first by stripping back the anterior sheaths of the muscles for a short distance above the pubes, so as to uncover the tendons, and plunging through these and the underlying peritoneum from without inward, a pair of pointed hemostatic forceps with which the ends of the fascial strip are seized and dragged into place, one on either side of the abdominal incision. After the peritoneum is closed, the ends of the fascial strip, which have been retained in forceps to prevent retraction, are pulled tight enough to hold the uterus firmly against the abdominal wall and are then crossed over the median line, best by tying them in a half knot, and stitched securely to each other in several places by means of chromic gut so that they cannot slip. The wound is then closed in layers. Additional security against slipping may be obtained by catching the ends of the suspending fascia in the bight of a figure of eight silkworm-gut suture used in closing the abdominal incision.

Fenestrated Band in Fractures of Bone.—Collins describes a new metal band consisting of an alloy of nickel and silver which he has used in operations on bone fractures.

Patella Splint.—The appliance used by Rectenwald consists of thin leather straps and felt pads held in place by a mixture of tallow (1 dram) and burgundy pitch (3 ounces).

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Archives of Radiology and Electrotherapy, London

October, 1919, **24**, No. 5

Mode of Spread of Cancer in Relation to Its Treatment by Radiation. W. S. Handley.—p. 137.
Lymphosarcoma Treated by Radium. D. Turner.—p. 154.
Roentgenologic Examination of Liver, Gallbladder and Bile Ducts. R. Knox.—p. 156.
Importance of Radiologic Examination of Inferior Surface of Liver. R. Ledoux-Lebard.—p. 162.

Dublin Journal of Medical Science

Octotber, 1919, Third Series, No. 574

Importance of Relativity between Physiologic Facts. E. Wooton.—p. 129.
Ductless Glands. G. H. Davis.—p. 137.

Glasgow Medical Journal

November, 1919, **10**, No. 5

*Syphilis of Circulatory System. I. MacKenzie.—p. 209.
*Rôle of Fat in Etiology of Infantile Marasmus. H. S. Hutchison.—p. 227.
With the 1/1st Lowland Field Ambulance in Gallipoli. G. H. Edington.—p. 238.

Syphilis of Circulatory System.—Mackenzie says that cerebral arteritis (or meningitis) of the late secondary stage should be treated with arsphenamin, beginning with 0.1 gm. and gradually increased to 0.4 gm. until a total of 3 or 4 gm. has been given. Mercury should also be given, and the result controlled by examination of the blood and cerebrospinal fluid. Late cerebral arteritis (chronic meningitis) should be treated by the initial administration of mercury and iodids for a fortnight, to be followed by gradually increasing doses of arsphenamin, the mercury and iodids to be continued meanwhile, and the results controlled by examination of the blood and cerebrospinal fluid. The greatest precaution must be observed in the treatment of aortitis and its coronary and myocardial complications. Preliminary measures of a hygienic and dietetic character must be taken before having recourse to the administration of arsphenamin. The general condition of the patient must be such as to preclude the possibility of circulatory failure incidental to the vasomotor disturbances which occasionally follow arsphenamin injection. The efficiency of the circulation must be restored to as great an extent as is compatible with the nature of the lesions. Iodid and mercury should be administered orally for a period of a fortnight, and, following this, an injection of 0.1 gm. of arsphenamin may be given. This should be repeated every three days for a fortnight, when the dose may be increased to 0.2 gm. In no case should more than 0.2 gm. be given at a time. Careful observation should be made to note the possible advent of a vasomotor reaction during the injection. This is heralded by a change in the quality of the pulse, which takes on a bounding character and increases in rapidity, and also by a flushing of the face. If any of these phenomena appear, injections should be stopped immediately. The accessory treatment employed in cardiac syphilis with coronary disease, aortic regurgitation, or angina should be continued. Varicose ulcers or chronic phlebitis of the later stages should be treated with arsphenamin and mercury in the ordinary way. In a case of chronic varicose ulcer, excellent results are obtained from the local application of gauze soaked in a 1 in 30 solution of alkalized arsphenamin. This may be alternated with the local application of fresh human serum applied in the same way.

Etiology of Infantile Marasmus.—In Hutchison's opinion there is no evidence to show that in infantile marasmus a defective absorption of fat is a factor in its causation either through imperfect digestion, passage of unduly large motions, or through a defect in the absorptive capacity of the bowel wall. Saponification of facts does not lead to loss of fat through defective absorption. A high percentage of insoluble soaps in the feces fat simply upsets the soap-fatty acid balance, and since the insoluble soaps possess feeble hydrophilic properties, constipation results. The iodin value of the feces fat is lower than in health, and this suggests that in marasmus there may be a qualitative error in absorption rather than a quantitative one. The alkaline reserve of the blood in marasmus is lower than in health, but the diminution is small, and does not suggest an acidosis of any consequence. There is no evidence that there is a lower alkaline reserve on a whole milk diet than on a weak fat milk, so that apparently in marasmus there is not an incomplete metabolism of fat.

Indian Medical Gazette, Calcutta

October, 1919, **54**, No. 10

Prevalence of Malaria and Anopheline Mosquitoes and Measures Recommended for Prevention of Malaria in Mercara. E. H. Wright.—p. 361.
Maternity and Child Welfare. B. N. Ghosh.—p. 365.
Schistosomiasis in India. F. Milton.—p. 368.
Fly Proof Latrine Seat for Indians. W. R. J. Scroggie.—p. 370.
*Influence of 1:1000 Platinum Solution on Pneumonic Infections. B. N. Anklesaria.—p. 372.
Kala-Azar Treated in the Nowgong Earle Hospital, Assam, Since 1917. S. S. Kundu.—p. 376.
Six Cases of Kodra Poisoning. D. J. Asana.—p. 379.

Use of Platinum Chlorid in Pneumonia.—Anklesaria has made use of a 0.1 per cent. solution of platinum chlorid in 5 minim doses, in combination with Burney Yeo's effervescent quinin mixture, every four to six hours, in the treatment of pneumonia. He claims to have had very good results. The effect in some instances was really very striking. Within twelve hours of the treatment a noticeable change for the better was observed. He has also used quinin in a somewhat different form and manner. An ounce of good quinin is well rubbed with an equal quantity of powdered carbonate of ammonia. The powder is then made into a paste with an ounce of liquor ammoniae and set aside for an hour. Absolute alcohol, 4 ounces, is now added to the paste and the solution is filtered. The filtrate thus obtained is added to a pound of aromatic spirits of ammonia (B. P.). The clear mixture is labeled mixture of quinin carbonate, 1:20. It is prescribed as follows:

		Gm. or C.c.	
℞	Sodii bicarbonatis	4	ʒ j
	Mist. quininae carbonatis	8	ʒ ij
	Vini ipecacuanhae	2	♏ ss
	Syrup. aurantii	24	ʒ vj
	Aquae anisi q. s. ad	180	ʒ vj

M. Ft. misturam.
Sig. One ounce every four to six hours.

To the mixture for an adult, 10 minims of a 1:1,000 platinum chlorid solution are added on the first day, 7.5 minims on the second day, 5 minims on the third day, also on the fourth day if necessary, and then it is continued in 3 or 5 minim doses until recovery.

Journal of Laryngology, Rhinology and Otology, London

November, 1919, **34**, No. 11

Case of Infection of Lacrymal Sacs, Maxillary Antrums, Pharynx, Tonsils, Mouth and Parotid Glands Caused by Blastomyces Albicans (Thrush Organism). W. B. Brownlie.—p. 425.
Complications of Chronic Middle Ear Suppurations. J. S. Fracer, and W. T. Garretson.—p. 432.
Pharyngeal Diverticulum; Two Cases. W. H. Kelson.—p. 444.

Lancet, London

Nov. 8, 1919, **2**, No. 5019

*Amebic Dysentery from Point of View of Microscopic Diagnosis H. A. Haig.—p. 823.
*Mechanism of Immunization with Special Reference to Lipase. J. A. Shaw-Mackenzie.—p. 825.
*Picric-Brass Preparations in Treatment of Lupus. H. A. Ellis.—p. 827.
Case of Trypanosoma Rhodesiense Infection with Recovery. C. W. Daniels and H. B. Newham.—p. 829.
Chloroma Simulating Mastoid Disease. E. C. Lewis.—p. 830.

Microscopic Diagnosis of Amebic Dysentery.—For the fixation and staining of amebas, motile and encysted, Haig makes thin smears from the fresh stool, selecting, where present, a portion containing mucus and blood, on cover slips, and floated, without drying, smear downward, on the following fixing solution: corrosive sublimate (saturated aqueous solution) 2 parts; absolute alcohol, 1 part. Fixation is complete in about thirty minutes. The smears are then placed film upward in iodized alcohol in order to remove the last traces of sublimate, washed in distilled water, and then stained as follows: (1) Soak for several hours in a 4 per cent. solution of iron alum (made with violet crystals); (2) wash in distilled water; (3) stain in Heidenhain's hematoxylin for several hours (or over night); (4) wash in distilled water; (5) place in 1 per cent iron-alum solution until decolorization has reached a satisfactory stage; (6) wash in distilled water and counter stain with 5 per cent. aqueous eosin solution; dehydrate through the alcohols, clear in xylol, and mount on a slide in Canada balsam.

Mechanism of Immunization.—Mackenzie claims that the addition of pancreatic coenzyme and of vaccine to serum or blood in vitro exerts a lipolytic action. The serum so treated has bactericidal properties. The resulting tissue lipolysis in the case of vaccine appears in certain details to be different from pancreatic lipolysis. Preliminary experiments indicate that serum (autoserum) diluted and heated in which the coenzyme or coenzymes of the serum are present activates in a similar way the inactive prolipase of fresh serum. In induced tissue lipolysis an explanation in part is afforded of natural and therapeutic immunization.

Picric-Brass in Treatment of Lupus.—Ellis now uses a saturated solution of picric in sulphanilic acid. This is made by adding picric acid to sulphanilic acid and raising to a temperature of 100 C., a subsequent addition of 1 per cent. phenol being made. The combination has been named sulphanilic picric. The amount of picric acid taken up is about 2 per cent., and the liquid does not show the presence of free picric acid. Ellis claims that its power of selection of tuberculous tissue is immediately apparent on application, and its destructive force is deeper and more extended than is the case in the picric brass preparations. (See also THE JOURNAL, April 16, 1919, p. 1191.)

Bulletin de l'Académie de Médecine, Paris

Oct. 14, 1919, **82**, No. 31

*Diphtheria Antitoxin. Louis Martin.—p. 173.
*Cultivation of Anaerobes. J. Lignières.—p. 181.
*Surgical Removal of Wrinkles. J. Bourguet.—p. 183.
*Exophthalmic Goiter as Cause of Sterility. R. Blondel.—p. 185.
*Blood Pressure of Aviators. Georges Ferry.—p. 188.
*Formulas for Doses of Radiant Energy. II. Guilleminot.—p. 191.

Twenty-Five Years of Diphtheria Antitoxin.—Martin analyzes the records in regard to the prevalence and mortality of diphtheria since the introduction of antitoxin in 1894. The highest known death rate per hundred thousand inhabitants, before that, he says, was 200 at Berlin in 1883; next at Paris, 100 in 1882. Since then Paris has never gone as high as 27.7 except in the year 1901, and the average everywhere has been below 20, and often below 10. The improvement has been progressive and continuous. "Would that other diseases might soon profit in the same way," he exclaims, "by this fruitful union of the bacteriologist and the practitioner."

Improved Technic for Cultivation of Anaerobes.—Lignières calls attention to the advantages of a semiliquid culture medium for cultivating anaerobes, a soft, tremulous jelly made by adding only 0.25 per cent. gelose to the bouillon. He calls it "quarter gelose," and inoculates it with the germs from a pipet as usual. In addition to the ordinary solid and fluid culture mediums we now have the semifluid, which affords the complete response to our queries.

Operative Correction of Wrinkles.—A method of taking up a fold in the skin in the shadow of the hair, etc., to smooth out wrinkles was described in these columns, July 5, 1919, p. 70. Bourguet gives the details of the principles here, but no illustrations.

Hyperthyroidism as Responsible for Sterility.—Blondel comments on the prevalence during the war of the emotional factors known to cooperate in the production of exophthalmic goiter, and remarks that he has not been surprised to find hyperthyroidism much more prevalent now than in former years, especially in women. Any one of the main symptoms, the exophthalmos, the tachycardia, tremor or goiter, may alone reveal the excessive functioning of the thyroid, and explain any one of numerous trophic and other changes. Chief among these he has noticed a decrease in the size of the uterus. This atrophy of the uterus is possibly the explanation of sterility in certain cases, and as such the causal hyperthyroidism should be combated. There are several ways of doing this, raying the thyroid, injecting serum from thyroidectomized animals, thymus treatment, and other means.

He prefers thymus treatment, and has been using it for years as the routine treatment in exophthalmic goiter. He gives half of a raw thymus from a lamb, chopped and mixed with a little flour, salt and butter to make small balls that are mixed with soup as it is eaten. Subcutaneous injection of the extract is more active, but less convenient for the patient. Thymus treatment is logical, he reiterates, on account of the antagonism between the thymus and thyroid, and years of experience have proved the soundness of these premises. He warns in conclusion that we must be wary in giving iodin in cases of amenorrhea or we may whip up an incipient exophthalmic goiter. The thymus treatment in these cases of sterility might be supplemented by massage of the uterus and dilatation with laminaria for three or four days, each month or two months. The pathologic condition does not seem to be able to right itself spontaneously but with this treatment perseveringly carried out good results were obtained in the majority of his cases.

Influence of Repose on the Blood Pressure of Army Aviators.—Ferry explains the two main phases of aviators' asthenia, and comments on the depressing and sclerosis-inducing action on the human organism of aviation, and on means to stave this off as long as possible by rest, diuretics, epinephrin, and heart tonics.

Calculation for Doses of Radiant Energy.—Guilleminot gives the mathematical expressions for the penetrating power of the roentgen rays.

Bulletin Médical, Paris

Oct. 4 and 11, 1919, **33**, Nos. 42-43

*Curability of Renal Tuberculosis. F. Cathelin.—p. 555.
*Traumatism of the Wrist. Jeanne and A. Mouchet.—p. 567.

Curability of Renal Tuberculosis.—Cathelin discusses whether there is a possibility that the tuberculous processes in the kidneys which surgeons remove might have healed under medical measures alone. The intense cystitis is the sign of surgical renal tuberculosis, and it is no more possible to cure this by medical measures alone than the lesions in the kidney above. He defies any one to find a single specimen of kidneys preserved in the museum of the Hôpital d'urologie in which any medical treatment could have offered

any chance of a cure. The medical cases, he reaffirms, are those with lesions in both kidneys, with pyuria and bad general condition. "Medical," here, means only "Bilateral; Hands off," whatever the anatomic form may be. Study of the physiology and the chemistry of the kidney will bring further progress; the pathologic anatomy is of little moment as the tuberculous process is single, although we encounter it in different phases.

Mechanism of Traumatism of the Wrist.—Jeanne and Mouchet illustrate the exact mechanism of the different ways in which the wrist may become dislocated or fractured. This gives the clue to treatment in each case. See review in Paris Letter, p. 1625.

Bulletins de la Société Médicale des Hôpitaux, Paris

Oct. 10, 1919, **43**, No. 27

Prevalence of Acute Anginas. Courcoux and J. Lermoyez.—p. 794.
Emetin with Bilharziosis of Bladder. Collignon and Monziols.—p. 796.
*Differential Auscultation. L. Azoulay.—p. 797.
Sensory Disturbances in Case of Cerebellopontine Angle Tumor. P. Marie, C. Chatelin and H. Bouttier.—p. 800.
*Alcohol in Cerebrospinal Fluid. E. Lenoble and F. Daniel.—p. 804 and p. 809.

Differential Auscultation.—Azoulay remarks that bifocal auscultation seems to be almost unknown in France although it has long been practiced in the United States but has never been utilized to the full, he thinks. The lumen of the stethoscope is too narrow, as a rule, and he has found that it works best in connection with a telephonist's headpiece. Changes of attitude may facilitate the examination.

Alcohol in the Cerebrospinal Fluid.—In this fifth communication on this subject, Lenoble and Daniel report that tests on eight persons demonstrated that exactly 325 gm. of absolute alcohol must be ingested before any appears in the cerebrospinal fluid. It appears first in the urine, and disappears early here. The subjects were in the hospital for white swelling, pulmonary emphysema or other chronic pathologic condition, and the alcohol was given in wine or rum. They describe further five cases in which the alcohol found in the cerebrospinal fluid gave the clue to the diagnosis. In three cases this demonstrated that the alcohol had been responsible for the fatal cerebral hemorrhage, and testified further that at least 325 c.c. of alcohol had been ingested. In another case it proved that irregular epileptiform seizures and acts of impulsive violence which had been ascribed to the underlying epilepsy were in reality the consequences of alcohol intoxication. This case suggests the necessity for revision of certain phenomena which we now attribute to petit mal. In the fifth case, mental impairment and tendency to ataxia in the man of 54 were explained by the alcohol found in the lumbar puncture fluid during eighteen days. When it finally disappeared from the fluid, all the symptoms subsided also, and the diagnosis was clear for the first time.

Journal de Médecine de Bordeaux

Oct. 25, 1919, **90**, No. 20

*Deformity from Fracture of Pelvis. J. Andérodias.—p. 423.
*Intermittent Claudication. Cornet.—p. 427.
*Torsion of Spermatic Cord. F. Papin.—p. 429.
*Pathologic Modification of Pupil Reflexes. Cabannes.—p. 432.
Electric Alarm Bell System for Control of Actual Death in Cemetery Watch Station. J. Peyrot.—p. 434.

Deformity from Fractured Pelvis.—Andérodias relates that cesarean section was done just as labor began, with complete success, although the left side of the pelvis was reduced in size by at least a half from the old fracture.

Intermittent Claudication.—Cornet's patient was a woman of 75 with renal sclerosis and intensely painful arteritis of the tibialis posticus. An elastic band was thrown around the thigh at the upper third to relieve the pain, which it accomplished at once. The constriction was not tight enough to arrest the pulse in the dorsal artery in the foot; it was kept up for two hours and repeated twice the next day. The intermittent claudication had been rapidly progressive, and the edema, hypo-esthesia, hypothermia and some purpuric patches indicated obliteration of the vessel. But the immediate subsidence of the pain and edema and the retrogression of the entire syndrome seemed to indicate merely spasm of the artery, on a basis of arteriosclerosis.

Torsion of Spermatic Cord.—Papin reports two cases. In one the torsion was of the recurring form with occasional attacks of pain and abdominal reflex phenomena. In Lapointe's compilation of thirty-seven cases, seven were of this recurring form. In two thirds of the cases in which the pedicle was untwisted and the testicle left unmolested, suppuration compelled its removal later. The infection responsible for this may have been blood borne, or from the usually coexistent hernia, or the operation may not have been aseptic, the damaged testicle being defenseless against germs that a sound organ would speedily master.

Modification of the Pupil Reflexes.—Cabannes discusses reflex pupil anomalies in one or both eyes, especially non-tabetic anomalies.

Journal de Radiologie et d'Electrologie, Paris

October, 1919, **3**, No. 9

*Increase in Outline of Heart on Reclining. H. Dausset.—p. 385.
*Tubes for Roentgen Work. F. Arcelin.—p. 389.
*Roentgenologic Signs of Abscess in Liver. J. Colanéri.—p. 395.
*The Electric Reactions in Tetanus. R. Gaudu cheau.—p. 403.
*Gage for Radium Emanations. A. Laborde.—p. 408.
*Roentgenology of Pyloric and Duodenal Ulcer. Laquerrière and Jeandel.—p. 410.
Roentgenogram of Horseshoe Kidney. N. Voorhoeve.—p. 414.
*Roentgenotherapy in Paget's Disease. G. Haret.—p. 416.
*Movements of Luminous Particles in Gas. H. Guilleminot.—p. 419.

Change in Outline of Heart in Different Positions.—Dausset calls attention in particular to the increase in the area of dulness over the heart when the subject reclines. He found that the heart spread out in this way in twenty-two of fifty men examined while twenty-five showed no change. These were the strong and robust; men with flabby muscles and not breathing with normal force were more apt than others to show this spreading out of the heart area. In some, only a certain part of the heart spread out in this way, which may prove useful in differential diagnosis. The outline of the area may increase by as much as 30 sq. cm.

Tubes for Roentgen Work.—Arcelin analyzes some of the phenomena presented by the tubes in instantaneous radiography with his timing record. They may throw new light on the composition of the rays. He remarks in conclusion that the size of the zone of impact is an important factor in the results. For radiotherapy, the zone of impact should be large, to generate and diffuse heat, but in seeking for a minute foreign body, in the eye for instance, the smaller the zone of impact the better. It might be well to ask dealers to specify the size of the zone of impact when buying a tube.

Roentgenologic Signs of Abscess in the Liver.—Colanéri shows by six illustrations the presumptive signs of an abscess in the liver. He classes them as static or radiographic, and functional or radioscopic signs.

The Electric Reactions in Tetanus.—Gaudu cheau records the findings with electric tests applied to muscles and nerves in a man who had quite recovered from tetanus, and in a second man just entered on convalescence. The responses were still far from normal.

Table for Radium Exposures.—Laborde publishes a long table for ready reference and comparison for doses and duration of exposures to radium emanations in closed tubes.

Radiologic Findings After Operative Treatment of Gastric and Duodenal Ulcer.—The numerous roentgenograms reproduced confirm the satisfactory outcome when the pylorus has been excluded by throwing a ligature around the stomach above the lesion, after the gastro-enterostomy has been concluded. Although the peristaltic waves are arrested by the ligature, yet they have not shown any lack of vigor during the nearly two years since.

Roentgenotherapy in Paget's Disease.—Haret relates the clinical cure by raying of Paget's disease of the nipple in a woman of 70. He has now two cases in which the clinical cure dates from nine to ten years, and one from six years, while two cases are still improving under treatment. These facts justify a more optimistic view of this disease.

The Movements of the Luminous Particles in Gases.—Guilleminot describes experimental confirmation of the kinetic theory of heat, commenting on the special interest this has for radiologists.

Journal d'Urologie, Paris

October, 1919, **8**, No. 4

*Ascending Ureteritis. Rochet.—p. 257.
*Hydronephrosis Revealed by Trauma. Aimes and Delord.—p. 285.
*Incontinence with Renal Tuberculosis. G. Constantinesco.—p. 291.
*Microscopic Examination in Urologic Cases. M. Vivier.—p. 295.

Ascending Ureteritis.—Rochet has been studying on dogs, rabbits and guinea-pigs infectious processes in the lower urinary passages with intact or only slightly involved kidneys. The findings confirm his clinical experience that infection may spread upward, favored by some retention or chronic congestion of the ureter from some focus nearby, or by direct trauma of the ureter from a calculus or catheter. The ascending infection is less grave than the descending, if it can be arrested in time by curing the cystitis, correcting retention and disinfecting the whole tract and rendering it freely permeable throughout. Some minor operation may be necessary for this, to remove constricting bands, etc., as in a case described in a young woman. She had been having for two years attacks of pain in the right ureter region, and the catheter showed pyuria in the lower segment while urine from the pelvis was normal. There was a history of occasional brief mild cystitis; only the colon bacillus and diplococcus could be cultivated from the urine. The exposed ureter was found dilated in the lower half, and embedded in a thick fibrous sheath although the ureter walls were supple. The ureter was merely freed from this adherent sheath, and the clinical cure has been complete during the nine months to date. Rochet has found that an oily or fat vehicle for disinfection of the urinary passages clings longer to the walls and is more effectual than an aqueous solution of the disinfectant. He is now testing the application to the floor of the bladder of substances that may generate gas or fumes that can find their way spontaneously into the ureters, iodin, hydrogen dioxid or formaldehyd, for example.

Hydronephrosis Revealed by Trauma.—The hydronephrosis in the boy of 12 developed in about five days after the fall on the abdomen, and 3 liters of blood-stained urine were found in the kidney. In the eighteen similar cases on record the average interval was three or four weeks, but in some cases it was several years. The operation in this case the fifth day demonstrated beyond question that the hydronephrosis was of long standing, and that the trauma had merely exaggerated and revealed it. The boy's girth had always been rather large.

Incontinence of Urine in Renal Tuberculosis.—This is Constantinesco's second communication on this subject, and he now relates that nocturnal incontinence of urine was the first symptom to bring the patient to the physician in two of a recent series of twenty-eight cases of renal tuberculosis. These two patients were 15 and 17 years old, and the incontinence had followed a period of increased frequency of micturition.

Microscopic Examination in Urologic Cases.—Two colored plates accompany this concluding instalment of Vivier's study. He warns that microscopic examination is instructive only when the urine is fresh and clean, and that there is no use attempting it otherwise. The best plan is to send the patient himself to the laboratory.

Paris Médical

Oct. 18, 1919, **9**, No. 42

*Wounds of Both Chest and Abdomen. Schwartz and Quénu.—p. 301.
*Chronic Tuberculous Endocarditis. P. Nobécourt.—p. 305.
*Orthopedic Heliotherapy for Tuberculous Joints. L. Jaubert.—p. 311.

Wounds Involving Both Chest and Abdomen.—Schwartz published in 1912 a study of injury of the diaphragm from gunshot or stab wounds, and he here brings the subject down to date with the ample experience of the war. The incision he advocates and illustrates was described recently, page 1315, as used for diaphragmatic hernia.

Chronic Tuberculous Endocarditis.—The boy of 13 whose case is described by Nobécourt has chronic endocarditis although he has never had acute rheumatism, chorea or scarlet fever, but he shows numerous local tuberculous lesions, caries of the spine, spina ventosa, tuberculous abscess, tracheobronchial glandular lesions and mediastinitis. The boy is thus *un tuberculeux et un cardiaque*, and treatment and prognosis have to bear this in mind.

To Combine Orthopedic Treatment and Heliotherapy.—Jaubert refers to tuberculous joint disease, and shows the different casts, splints, beds, etc., which ensure immobilization while permitting ample exposure to the sun. Hinged plaster casts can be removed during the exposures, and he describes the technic for making very thin light casts with celluloid or plaster and glue.

Presse Médicale, Paris

Oct. 18, 1919, **27**, No. 60

*Treatment of Intolerance for Milk. E. Weill.—p. 601.

To Cure Infants of Intolerance for Milk.—Weill relates that in the last six months he has had thirty breast-fed infants and eleven partly breast fed who all presented digestive disturbances for which no infection nor intoxication could be incriminated, and no lesion of any kind could be found. He reasoned that these digestive disturbances must be a manifestation of anaphylaxis, and he sought to combat them by antianaphylaxis, that is, by subcutaneous injection of milk. The favorable results surpassed all his anticipations. This vaccination is specific; human milk vaccinates against breast milk alone, and cow's milk against cow's milk. The infants given the injection six months ago have had no relapses and have developed normally since. He describes eight cases to show the different types of disturbances from intolerance of milk in infants without organic lesions. Some vomit soon or late after most of the feedings, and the milk may be quite fluid; some have a higher number of stools. They are greenish and accompanied with chafing. Or there may be tenacious constipation. These digestive disturbances are usually associated with nervousness. The babe often screams after feeding as if suffering, until it vomits. It is restless, starts at the slightest sound, stiffens in its mother's arms, and is hard to get to sleep, but there is no fever and the general condition keeps good. Eczema or impetigo may be observed, but no eruptions suggesting anaphylaxis. Change to another milk or food or certain drugs may correct the disturbances, but only transiently; the latter return sooner or later. The best results have been obtained when milk was dropped entirely, but infants are unable to thrive in the long run without milk.

In some of his cases the intolerance for breast milk was apparent from birth; in others, not until a month or two later. One previously healthy infant developed them at the age of 1 month when the mother had a phlegmon. Intercurrent disease in either the babe or the mother may modify the milk or the digestion so that this intolerance may become manifest at any time. The identity of symptoms and of the therapeutic influence of the subcutaneous injection of the specific milk shows the common basis for the primary and secondary intolerance. He injects the milk in the flank as a rule. With cow's milk, there is a rise in temperature for a few hours but not with the milk from the nursing woman. In two cases a reinjection induced slight shock for ten or fifteen minutes, the extremities growing cold. The breast milk can be injected raw, boiled, or heated to 110 C.; cow's milk should be boiled or heated to 110 C. for twenty minutes. The dose of 5 or 10 c.c. seems to be best. If the improvement is not pronounced, he makes a second or third injection, proceeding always by the Besredka progressive method, first 0.5 c.c., then 2 c.c. an hour later and not until after three hours the full dose of 5 or 10 c.c. In one case severe laryngospasm in an infant of 12 months seemed to be arrested by less than 1 c.c. of the milk injected twice. Weill is now trying this antianaphylaxis in cases of congenital vomiting, injecting both the mother and the infant with the mother's milk.

Oct. 22, 1919, **27**, No. 61

*Surgery of the Large Intestine. J. Okinczyc.—p. 613.
*Sodium Cacodylate in Relapsing Fever. J. L. Peyre.—p. 615.

Artificial Anus.—In this instalment of his article on the surgery of the large intestine, Okinczyc gives an illustrated description of the technic for making and for correcting an artificial anus.

Oct. 25, 1919, **27**, No. 62

*Syphilis of the Stomach. R. Bensaude and L. Rivet.—p. 621.

Syphilis of the Stomach.—Bensaude and Rivet review the manifold forms in which syphilis may manifest itself in the stomach, describing with the roentgenologic findings a number of typical cases. There are no pathognomonic symptoms, but when everything else can be excluded, syphilis can generally be accepted, as also when there is multiple localization, as in esophagus and stomach, or the skiagram is unusual. A vigorous course of arsenical treatment improves the general condition whatever the cause, as a rule, but in syphilis the local lesion shows marked improvement besides. By this twofold effect they were able to differentiate and cure the syphilis in ten recent cases. This drug test is most instructive when it has been preceded by failure of dieting and the other ordinary measures for treating stomach derangement. Iodin and mercury by the mouth are usually well borne in case of gastric syphilis, while lesions of other kinds are aggravated by them. Stenosis once installed is scarcely amenable to any medical treatment, but before this stage is reached there is no pathologic condition which yields such brilliant therapeutic successes as gastric syphilis.

Progrès Médical, Paris

Sept. 20, 1919, **34**, No. 38

*Primary Suture for Skull Wounds. E. Chauvin.—p. 371.
*Roentgenology of Tuberculosis. L. Ribadeau-Dumas.—p. 373.
*Ether in Treatment of Tetanus. Audrain.—p. 376.
*Vaccine Therapy of Typhoid. P. LaFosse.—p. 377.
*Breech Presentation. H. Vignes.—p. 378.

Primary Suture After Wounds of the Brain.—Chauvin reports eighteen cases with thirteen healing by primary intention after primary suture. The outcome is not known in the other cases or they are still under treatment; only one was still wearing the drain when discharged. He sutured without draining only in four cases, but he never left the drain in place for over three days.

Early Diagnosis of Tuberculosis.—Ribadeau-Dumas expatiates on the valuable aid from roentgenology in detecting incipient tuberculosis. It not only locates the focus in the lung but shows up the diseased mediastinal glands which are the most evident tuberculous lesions in children.

Ether in Treatment of Tetanus.—Audrain states that the benefit from intramuscular injection of ether in whooping cough inspired him to treat tetanus by inhalation of ether. The amount was not enough to put the patient to sleep. The patient held the mask himself and the ether was given, 60 c.c. morning and night, by the drop or teaspoonful. Seven patients thus treated recovered, but the eighth died the tenth day with asystoly for which chlorin impurities in the ether were probably responsible.

Vaccine Therapy in Typhoid.—LaFosse gave Besredka's sensitized vaccine in 62 cases of typhoid; all recovered except 12. The prompt cure under the vaccine was striking in 24; the course was protracted in 12, and 10 developed complications and 4 had a relapse.

Breech Presentation.—Vignes discusses some recent publications on this subject.

Revue Franc. de Gynécologie et d'Obstét., Paris

August, 1919, **14**, No. 8

*The Justominor Pelvis. L. Demelin.—p. 270.
*Erosions of Uterine Cervix. D. Christidés.—p. 287.
*Premonitory Signs of Eclampsia. A. Van Cauwenberghe.—p. 294.
Hydrosalpinx from Fibroma in Uterus. J. Duvergey.—p. 302.
Inversion of Puerperal Uterus. A. Grosse and Collet.—p. 305.

The Justominor Pelvis.—Demelin applies this term to the pelvis that is too narrow in an otherwise well formed woman. It may be of the adult type but unduly small, or it may be of the infantile, funnel shape. The hips are narrow, the diameter from crest to crest is only 24 or 25 cm. instead of the normal 27 or 28, and the diameter from spine to spine only 18 to 21 cm. Menstruation is usually late, and some endocrine disturbance is responsible for this and for the premature junction of the epiphyses or primary points of ossification which arrests the growth of the pelvis, just as premature occlusion of the fontanels arrests the growth of the skull. The accoucheur should be warned by the external measurements of the pelvis, roentgenography, etc. Premature delivery at the eighth month is advocated by some, but this has more drawbacks than advantages. If the conjugate diameter is 9 cm. or less, cesarean section at term is far preferable. Forceps is better than version if delivery by the natural route is attempted; the head should be in the oblique diameter and convergent forceps chosen. The difficulty increases with the progress of labor with this type of pelvis.

Erosions of the Uterine Cervix.—Christidés extols the advantages of Filhos' paste as a caustic but nontoxic treatment for erosions of the cervix. Its former vogue died out on account of the difficulty of applying it, but he has conquered these difficulties and describes seven cases in detail to show its superiority to other methods of treatment in old rebellious cases when operative measures are refused. The caustic of Filhos is a mixture of caustic potash and quicklime in alcohol, in pencil form. Aubert has also reported excellent results in fifty cases. The caustic is applied with special forceps to the erosion and is held there until this mucosa turns black and oozes. This takes only two or three minutes at most. The surface is then wiped off and tamponed with medicated gauze. Two vaginal douches are given daily and the application is repeated when the eschar has dropped. From two to four applications are the maximum.

Premonitory Signs of Eclampsia.—Van Cauwenberghe writes from Ghent to comment on the frequency of eclampsia recently and the scarcity of warning symptoms from it. The urine was often apparently normal, but eclampsia was most common when there had been digestive disturbances, uncontrollable vomiting in particular. In suspicious cases, venesection may be useful, or at least the natural losses of blood should not be combated before an amount of blood equivalent to a venesection has been lost. Hence pituitary treatment is contraindicated. In one of the five cases of eclampsia reported in detail, a primipara of 18 had had actually no symptoms, except a little pain in the stomach, when the eclampsia developed. In another case, except for two periods of vomiting, early and late in the pregnancy, conditions were normal, but the young woman died in a convulsion. Another woman had a rapid delivery after pituitary extract had been given on account of the complete inertia of the uterus after labor had commenced, accompanied by frequent vomiting. Delivery was rapid but the uterus kept contracted for forty-eight hours, and there was scarcely any blood lost. Thirteen hours later cramps in the stomach developed, followed in four hours by convulsions and coma, but the woman recovered. In two previous pregnancies there had been vomiting but no eclampsia. In this latest delivery, the pituitary extract had locked up the uterus so there was not the usual loss of blood, thus depriving the woman of this safety vent, and tipping the scale in favor of eclampsia. The intense contractions which it induces may also tend to bring on convulsions. In the fifth case described there was no albuminuria but during labor there were headaches and disturbance in vision and a little edema in the feet. Expulsion was rapid and there was considerable loss of blood. The bleeding kept up for some time, but he refrained from injecting ergot or pituitary to arrest it. This escape of blood was followed by immediate subsidence of the headache, etc. He is confident that eclampsia had been impending in this case but was warded off by the profuse losses of blood.

Revue Neurologique, Paris

August, 1919, **26**, No. 8

*Intraspinal Treatment of Syphilitic Disease of the Nervous System. G. R. Lafora.—p. 625.
*Nervous Manifestations of Typhus. D. E. Paulian.—p. 650.

Intraspinal Treatment of Syphilitic Diseases of the Central Nervous System.—Lafora now has a record of fifteen cases of general paralysis in which the manifestations of the disease have retrogressed under his treatment, not only the symptoms but the laboratory findings in the lumbar puncture fluid as well. This latter does not occur with the spontaneous remissions in general paralysis. The secret of success, he says, is to diagnose the disease in its earliest phases, before it has been under way for more than six or eight months. This is possible, he explains, by the laboratory findings in the cerebrospinal fluid and blood. Two of these laboratory reactions are characteristic of general paralysis alone, namely, the Wassermann test applied with only 0.2 c.c. of the cerebrospinal fluid, and the special curve of the colloidal gold test, the figure being very different from the figure with other forms of cerebrospinal syphilis. With these two reactions, general paralysis can be detected even before any clinical symptoms become manifest. Then intraspinal treatment may arrest it for years, and perhaps permanently. It must be kept up possibly for a year and a half, that is, until the five laboratory reactions are permanently negative. Nine or ten months sufficed in some of his cases.

The same treatment proved almost always effectual in eight cases of tabes, the subjective symptoms rapidly subsiding, with some of the objective symptoms. It also proved the most effectual means to arrest progressive amaurosis, and in syphilitic radiculitis it suppressed the pains much better than intravenous treatment. He gives intravenous treatment in the intervals, testing the susceptibility by gradual therapeutic preparation, both intraspinally and by the vein, as he describes in minute detail. His list includes also four cases of syphilitic spinal and two of cerebral paraplegia. He uses the autoserum prepared in vitro by the Byrnes and Ogilvie methods. Four or five injections are made by the vein at intervals of from four to six days, 0.01 gm. of mercury and arsphenamin. The first intraspinal injection was made with arsphenamized serum, never more than 2 or 3 mg., and the maximal dose ever reached was 4 mg. of mercuric chlorid or 7 mg. of (French) neo-arsphenamin. The intervals were from twenty to forty days while the injections by the vein were made about twice a week, alternating the mercury and the neo-arsphenamin and suspending for two or three weeks at the end of six months. The efficacy of this treatment is extremely manifest in syphilitic processes which have not yet invaded the deep parenchyma of the nervous system, and meningeal lesions are only just beginning around the nerve lesions. (His previous report on the subject was mentioned in these columns, Dec. 14, 1918, p. 2031.)

Nervous Manifestations of Typhus.—Paulian refers to the tardy meningeal reaction in typhus, and the unequal pupils. He noted the latter in 60 per cent. of his cases, and it was evident months later, suggesting syphilis. Neuritis is also common; he saw fifty-five cases with this complication. In anther case of neuritis, facial diplegia developed nine months after the typhus, in two others during convalescence.

Correspondenz-Blatt für Schweizer Aerzte, Basel

Oct. 16, 1919, **49,** No. 42

*Partial Antigens. H. Walthard.—p. 1577.
*Influence of Morphin Content on Constipating Effect of Opium Preparations. F. Uhlmann.—p. 1587.

Partial Antigens in Diagnosis and Treatment of Tuberculosis.—Walthard refers to the Deycke-Much partial antigens on which so much conflicting testimony is accumulating. He applied them in the diagnosis of tuberculosis on 157 subjects, including 24 clinically healthy, 54 with bone and joint tuberculosis and 43 with urogenital tuberculosis. Only 15 of the total 157 failed to respond and 8 of these were in advanced tuberculosis; the others were normal children and young people. The titer of the response varied widely within brief periods, the conditions being apparently the same at each test. It seems as if the theory of the partial antigens is not based on solid premises, but it is important for research on immunity, and deserves further study as it throws light on many obscure points. Striking benefit was not obtained with the partial antigens in any instance, but some improvement was evident in some of the 20 cases of bone or joint tuberculosis and 5 of urogenital lesions.

The Influence of the Morphin Content on the Constipating Action of Opium Preparations.—The research was done on cats, and ten roentgenograms show the progress of the contrast meal. Uhlmann states that his findings confirm the different action of morphin and opium. The former whips up peristalsis, while the latter induces relaxation, actual atony. With colic pains, morphin arrests the pains but the peristaltic movements persist or may be exaggerated. Opium arrests the pains likewise, but in a different way, by relaxing and quieting the bowel.

Gazzetta degli Ospedali e delle Cliniche, Milan

Sept. 28, 1919, **40,** No. 78

Psychology of Simulation in Prisoners of War. Pellegrini.—p. 828.

Policlinico, Rome

Aug. 17, 1919, **26,** No. 33

*Typhus. Camillo Artom.—p. 985.
*Acute Lymphatic Leukemia. A. Gasbarrini.—p. 996.

Typhus in Prisoners' Camp in Italy.—Artom found at the necropsies during an epidemic of 500 cases of typhus at the prisoners' camp at Bari that edema of the brain, bronchopneumonia, and nephritis were constant. The mortality among the prisoners was 20 or 30 per cent. as they were debilitated from inadequate food before they had been taken prisoner. Among the Italian troops in the region the mortality was only 4 or 5 per cent. In one case there was no spotting at any time and none could be induced although the typhus was otherwise typical. Among unusual complications were laryngeal paralysis, panophthalmitis, intensely painful peripheral neuritis, and inflammatory processes in ear and parotid (fifty) and gangrene from arterial thrombosis, bilateral in most of the cases.

Acute Lymphatic Leukemia.—The boy of 15 died two months after the first symptoms had been noted, but a period of marked improvement had followed an intravenous injection of antistreptococcus serovaccine. There was a violent reaction with intense chill for an hour then fever of 40.2 C. Then great improvement followed; by the third day the leukocytes had dropped from 220,000 to 55,200 and by the twelfth day to 6,400 and the proportion of immature cells was much reduced. The uric acid content of the urine increased materially at the same time, confirming the actual leukolysis. An intercurrent febrile gastro-intestinal derangement from an error in diet aggravated the anemia, and the boy died within two days.

Aug. 24, 1919, **26,** No. 34

*Cerebrospinal Fluid in Typhus. R. Monteleone.—p. 1009.
*Modification of Bassini Method. M. Battaglia.—p. 1012.
River Fever in Japan. C. Basile.—p. 1016.

The Cerebrospinal Fluid in Typhus.—Monteleone was impressed with the high tension and high albumin content of the lumbar fluid in typhus, while the Nonne reaction was constantly negative. Agglutination with the proteus X occurred parallel with the blood and spinal fluid.

Improved Herniotomy.—Battaglia extols the advantages of the modification of the Bassini technic which he describes. He prepares the threefold layer as for a Bassini, and sutures with cross or D'Antona sutures if the muscles are stout. If not, he takes U sutures, the loop passing through the muscle fibers above and from within. The suture at the pubis includes the rectus muscle. When the sutures are drawn up the planes lap, and recurrence of the hernia is practically impossible. With this technic he has never felt the need for plastic reenforcement, not even in men of 60 to 75 with hernias of ten or twenty years' standing, actual eventrations.

Brazil-Medico, Rio de Janeiro

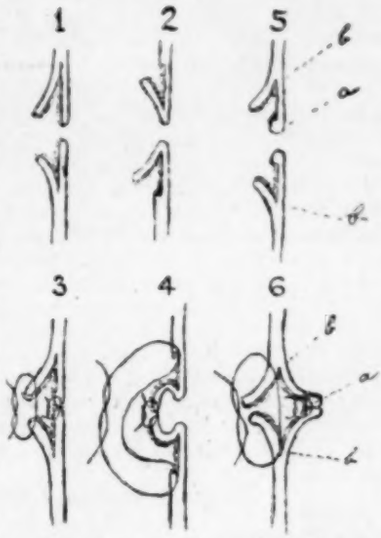
Aug. 30, 1919, **33,** No. 35

*Vesicovaginal Fistulas. J. Adeodato.—p. 273.

Sept. 6, 1919, **33,** No. 36

Large Doses of Quinin in Malaria. Alvaro da Franca Rocha.—p. 281.

Vesicovaginal Fistulas.—Adeodato relates that the gap in the vesicovaginal septum in the case he describes was 3 cm. in diameter. The perineum had been lacerated, besides, at the delivery about two years before. The fistula was readily corrected by a modification of the Fergusson-Braquehaye method, but he ascribes this success to his systematic preparation of the woman for the operation. With a retention catheter the urine was diverted, and hexamethylenamin and sodium benzoate were given, along with hot vaginal douches and tonics. Under this treatment the urine returned to normal, and the fistula became much smaller so that the operation was much facilitated. He dissected the tissues to separate the vesical and vaginal walls for 1 cm. back from the fistula all around, leaving a layer of vaginal tissue adherent to the bladder tissue in a ring around the fistula. The bladder defect was then drawn up and sutured, turning in the mucosa with the crown of vaginal tissue, leaving this to project into the bladder lumen. The vaginal opening was then closed with a suture thread passed through the farthest points of the separation of the vesical and vaginal tissues. By this means the former seat of the fistula was strengthened with quadruple layers of tissue. The knob projecting into the bladder will probably become flattened out in time as the bladder stretches and relaxes.



Figs. 1 and 3.—The centrifugal method for correcting vesicovaginal fistula. Figs. 2 and 4.—The Fergusson-Braquehaye method. Figs. 5 and 6.—The author's method.

Gaceta Médica de Caracas

Sept. 15, 1919, **26**, No. 17

*Ptosis of Liver with Cholecystitis. L. Razetti.—p. 175.
Cecal Diverticulum. L. Razetti.—p. 176.
*Insane Asylums. A. Ayala.—p. 178; E. Escomel.—p. 179.
*Vaccination Against Tuberculosis. J. Ferrán.—p. 181.

Ptosis of Liver with Cholecystitis.—The woman had had various attacks of vomiting and fever with pain in the iliac fossa but the region was too tender for palpation and the walls were rigid. The laparotomy on the assumption of chronic appendicitis, disclosed instead a much sagging liver, with empyema and stones in the gallbladder. One pole of the liver had sagged until it reached nearly to the groin. The tip of the gallbladder was at McBurney's point and explained the tenderness here, pressure on the gallbladder gorged with stones and pus giving a typical reaction. The first cholecystectomy was done at Caracas in 1918, but a number have been done since.

Care of the Insane.—Ayala comments on the revolution in insane asylums since the colony system came into vogue, and describes the fine institution of the kind in charge of Cabred in Argentina and the Magdalena colony in Peru. Cabred described his methods and success at a medical congress at Lima in 1913, and, without waiting for the congress to close, the authorities of the antiquated local asylum burned the old strait-jackets and other appliances for forcible constraint. "It was like an *auto da fé* of former days," Ayala remarks, "and from the ashes of these outgrown appliances has developed the new modern open-door colony." He urges Venezuela to follow in the footsteps of Peru.

Vaccination Against Tuberculosis.—This is Ferrán's own announcement of the principles of his method of vaccination against tuberculosis, as he presented it at the recent Spanish medical congress. See Madrid Letter, page 1074.

Gaceta Médica de Cartagena

July-September, 1919, **2**, No. 19-21

*Necessity for Sanatoriums for Tuberculosis. J. D. Tuñon.—p. 3.
Placenta Praevia. Lengua.—p. 8.
*Code of Ethics.—p. 12.

Necessity for Sanatoriums for the Tuberculous.—Tuñon says in the course of his remarks on tuberculosis, that great progress would be realized if the public dreaded tuberculosis as they dread leprosy, and made provision in the same way for segregation. Leprosy is very far from being as contagious as tuberculosis, the germs of which are spread at every breath, every greeting and every contact. He appeals to the authorities for the foundation of a sanatorium for the tuberculous in the Cartagena district. There is already a sanatorium for lepers.

Code of Ethics.—This proposed code was described in these columns recently, page 1170.

Medicina Ibera, Madrid

Sept. 13, 1919, **8**, No. 97

School Dental Clinics. Virgilio Losada.—p. 193.
*Infantile Gastro-Enteritis. J. Lloréns Moltó.—p. 195.

Infantile Gastro-Enteritis at Malaga.—Lloréns Moltó urges the necessity of milk stations and well baby clinics as the only means available to check the extremely high death rate among infants in Malaga.

Oct. 4, 1919, **9**, No. 100

Teaching of Pathologic Anatomy. L. López García.—p. 1.
Technic for Heliotherapy. Alvarez-Sierra.—p. 4.
*Laboratory Diagnosis of Hydatid Cyst. Angel López.—p. 5.

Differential Diagnosis of Hydatid Cyst.—López insists on microscopic examination of the sputum, exudate or puncture fluid in search for the scolices or membranes of the parasite; also on the eosinophil count, and on the fixation of complement test, the value of which is unquestionable. With these data it is possible to certify to the existence of echinococcus disease without subjecting the patient to a possibly futile operation.

Plus-Ultra, Madrid

June, 1919, **2**, No. 12

*Insanity in the United States. Santos Rubiano.—p. 295.
Recent Progress in Gynecology and Obstetrics.—p. 305; in Urology.—p. 318; in Heart Disease.—p. 329; in Ophthalmology.—p. 334; in Instrumentation.—p. 335; in Digestive Apparatus.—p. 343; in Neurology.—p. 350.
*Pure Insufficiency of Pulmonary Valves. E. del Campo.—p. 314.
*Recurring Dislocation of Shoulder. Bastos Ansart.—p. 322.
Case of Submoral Phrenasthenia. E. Fernández Sanz, C. Juarros and E. Mesonero Romanos.—p. 324.
Vaccine Therapy in Influenza. A. Salvat.—p. 348.

Insanity in the United States.—Santos Rubiano reviews with much detail the census compiled by the Committee for Repression of Mental Diseases, showing the numbers and distribution of the insane in this country in 1915. He remarks that "the large percentage of insane inhabitants is not to be wondered at in a country where the business failures mount up to 1,500 a month, and suicides average 16,000 per year, and the natality is the lowest of all civilized peoples."

Pure Insufficiency of Pulmonary Valves.—Del Campo ascribes to pure insufficiency of the pulmonary valves the hypertrophy and dilation of the right ventricle, with a diastolic murmur heard loudest in the left second intercostal space, and the dyspnea accentuated by effort. The patient was a woman of 24 with positive Wassermann reaction. Under specific treatment these symptoms subsided to a certain extent, and the patient has had no return of the former attacks of hyposystoly during the nine months to date. He calls attention to the anacrotic oscillation evident in the pulse tracings given from this case, saying that this has differential importance as the greater circulation seemed to be absolutely normal in this case. The tracing was most instructive when taken with the drum revolving at high speed.

Recurring Dislocation of the Shoulder.—Bastos Ansart ascribes the recurring dislocation to relaxation of the subscapular muscle. He corrects this by suturing the free margin of the subscapular to the periosteum of the anatomic neck and to the lips of the biceps. This simple operation answered the purpose admirably in the single case in which he has applied it to date. The man, an aviator, has had no return of the dislocation during the seven months since.

Prensa Médica Argentina, Buenos Aires

July 30, 1919, **6**, No. 6

*Intestinal Kinks and Membranes from Tardy Inherited Syphilis. M. R. Castex and Delfor del Valle.—p. 57, Conc'n.
Vaccine Therapy of Influenza. J. J. Mon.—p. 61.

Syphilitic Perienteritis.—This is the concluding instalment of this long and profusely illustrated article on the chronic symptoms in the abdomen which may be a tardy manifestation of inherited syphilis. Castex and Delfor regard the latter as a very frequent—perhaps the most frequent—cause of membranous bands and kinks. The inherited syphilis may likewise induce a set of chronic symptoms without appreciable anatomic lesions. The disturbances are due to deficient functioning of the endocrine glands which are the physiologic stimulators and regulators, the suprarenals and thyroid in particular. This type of chronic disturbance implies a prognosis and treatment quite different from those with membranous peri-enteritis, but the two types were combined in some of his cases. In six typical cases described, the patients were men of 20 and 28 and two women of 25 and 30. Some required surgical measures besides specific treatment, but great improvement or a complete cure was realized in all.

Aug. 10, 1919, **6**, No. 7

*Syphilis of Liver and Spleen in Child. L. L. Resio.—p. 65.
*Tuberculin Plus Heliotherapy in Treatment of Tuberculosis of Urinary Apparatus. J. F. Mieres.—p. 66.
The Physician and His Duty to Society. G. Aráoz Alfaro.—p. 68.

Ascites from Inherited Syphilis.—The child of 4 had had gastro-intestinal disturbance soon after birth, and the liver and spleen became enlarged and ascites had developed. Inoculation of animals was negative, but treatment for syphilis brought marked improvement. An intercurrent pneumonia was followed by return of the ascites, evidently this time the work of the pneumococcus, and ileus developed. This compelled a laparotomy to break up adhesions and evacuate the hemorrhagic effusion, and a second intervention to clear out a pus pocket. Then under mercurial treatment the girl was restored promptly to clinical health.

Heliotherapy plus Tuberculin in Treatment of Tuberculosis of the Urinary Apparatus.—Mieres describes three cases of tuberculosis of the kidney or bladder or both, in two men of 25 and 28 and a woman of 32, in which all the symptoms permanently subsided under combined heliotherapy and tuberculin treatment. He began with only five minutes' exposure and increased to full sun baths. The doses of tuberculin were extremely minute, seeking to imitate Nature's method of immunization by the infinitesimal amounts generated in a small tuberculous focus. In three other similar cases merely improvement was realized, and in a seventh case the disease continued to progress.

Repertorio de Medicina y Cirugía, Bogotá

September, 1919, **10**, No. 12

*The Triennial Medical Congress.—p. 617.
Amebiasis in Colombia. R. Zapata.—p. 643.
Experiences with Spinal Anesthesia. A. J. Castro.—p. 657.

The National Medical Congress.—Nearly all of this issue is devoted to the addresses at the triennial medical congress described in the news columns on another page.

Revista Médica, Puebla, México

Sept. 15, 1919, **2**, No. 1

Laceration of Fundus of Uterus. A. López Hermosa.—p. 2. Cont'n.
*Professional Secrecy. J. L. Vallejo.—p. 5.
*Intravenous Injections in the Neck. A. B. Vasconcelos.—p. 14.
Composition and Nutritive Value of Foods and Beverages of Mexican Native Races. M. Ibañez.—p. 17. Cont'n.

Professional Secrecy.—Vallejo discusses whether the authorities have any right to compel a physician to violate professional secrecy. In connection with the organized campaign against venereal diseases, a bill was presented in the legislature to compel physicians to report to the Consejo Superior de Salubridad all the syphilitics among their clients, specifying names, etc. Vallejo quotes Hippocrates' oath on the inviolability of the professional secret, and states that a similar oath is exacted of the medical graduates of the University of Montpellier. He would like to have a similar oath made part of the graduation procedures everywhere. The Mexican laws on privileged communications are based in the main on the United States laws. He reproduces the principal paragraphs, and points out certain contradictions, and emphasizes that society has other and more important interests than mere conviction of criminals.

Intravenous Injections in the Neck.—Vasconcelos' two photographs show the technic for injection into the jugular vein. He cites Najera, who witnessed in 1912 injections by the jugular vein, and Leredde who in his (1917) work mentions the advantages of the jugular vein for injection in children. Vasconcelos congratulates Kaliski for his recent work on the subject in THE JOURNAL, May 31, 1919, p. 1613, seeking to render more popular this method which with a certain skill is simple, harmless and useful. He has applied this technic himself in giving arsphenamin to five men and neoarsphenamin to five women, and the patients found it more agreeable than by a vein in the elbow. But he prefers the latter for the routine route, next the jugular, or a vein in head or foot, or by the rectum, never utilizing a varicose vein, as Rosenheck proposes, as this might set up phlebitis.

Hospitalstidende, Copenhagen

Oct. 1, 1919, **62**, No. 40

*Simultaneous Extra-Uterine and Normal Pregnancy. M. Fenger.—p. 1113.
*Abnormally Small Hearts. K. Secher.—p. 1119.

Normal plus Extra-Uterine Pregnancy.—Fenger comments on the rarity of the coincidence of intra-uterine and extra-uterine pregnancy. In Neugebauer's compilation of 169 cases, the diagnosis had been incarcerated retroflexion in 6 cases, and the attempt in 3 of the cases to correct the displacement proved fatal. In 127 of the cases rupture led to intervention, but in the majority the intra-uterine pregnancy was not discovered at the time, the changes in the uterus being attributed to the influence of the tubal pregnancy. The gravid uterus usually expelled its contents soon afterward, as in the personal case he describes. Eleven days after the laparotomy for the ruptured tubal pregnancy, phlebitis developed and a 6 cm. fetus was found in the vagina. The pregnancy continued uninterrupted only in 8 of the 70 in this group. In 40 of the 169 cases the uterus abortion occurred first, and the extra-uterine was not suspected; 27.5 per cent. died from lack of proper operative measures when the tube ruptured. Death usually occurred in an hour and was ascribed to shock from the abortion. Even in the cases in which a prompt laparotomy saved the woman, the ectopic pregnancy was a surprise. In 42 of the 169 cases both pregnancies continued to the twenty-eighth week or to term. In 4 cases both children were viable, the accoucheur delivering one from within and one from outside the uterus. In 10 cases the extra-uterine fetus was expelled through a fistula. Some of the women succumbed to fulminating intraperitoneal hemorrhage in these late cases. The main thing is to bear in mind the possibility of a normal plus an ectopic pregnancy. It is so rare that we are apt to forget the possibility. According to Neugebauer, the true condition was recognized at the operation only in 7 cases.

Small Hearts.—Secher reviews recent literature on the constitutionally small or drop heart, pendulum heart and thorax paralyticus, and emphasizes the lesser resisting power in these conditions. Geigel multiplies by ½ the figure representing the area of the heart and divides by the figure representing the length. The quotient in normal subjects ranges from 15 to 23. He found it under 14 in 10 per cent. of 2,939 persons examined.